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LONG-RANGE PLAN
For Meeting Mental Health, Developmental Disabilities &
Substance Abuse Services Needs for the
State of North Carolina
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Executive Summary

Session Law 2005-276 called for the development of a Long-Term Plan for Meeting Mental Health, Developmental Disabilities and Substance Abuse Services needs. The Department of Health and Human Services and the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DD/MH/SA) issued a Request for Proposal and awarded it to Heart of the Matter Consulting, Inc. This report is a summary of the work and findings for the long range plan as required by Senate Bill 622 Section 10.24 and pursuant to G.S. 122C-102.

Established by the NC Legislature as a committee of the NC General Assembly in 2002, the Legislative Oversight Committee (LOC) has the oversight responsibility for providing ongoing guidance to the Division of Mental Health, Developmental Disabilities and Substance Abuse on services and system design throughout the state. The report and Gap Analysis will be presented to the LOC. The Division Director appointed an external advisory team to serve as the Steering committee for the Long Range Plan.

The goal of this project is to identify information, practices and resources that can be used to shape the public delivery system to best meet the needs of those North Carolinians that rely upon state supported mental health, developmental disabilities and substance abuse services to live in the community. This Plan contains a Gap Analysis that incorporates tools for the state to continuously determine the type and amount of services needed including projecting population estimates through 2010 and a system for startup funding.

It is noted that this project has taken the Statute literally and made every effort to contain growth to what can be managed over a five year period. As such, this analysis does not represent the "Ideal" system. To achieve a more ideal state would require sufficiently more resources than indicated in this analysis. However, Models have been developed that will allow the State to change the assumptions upon which the system was configured for this analysis and to change those assumptions as required, as political will changes or as new resources become available.

Any system of publicly funded services must analyze the needs of persons for whom it is required or for whom it chooses to fund care and determine whether the funds it has available are sufficient to meet those needs. If not, the system has three options: (1) the expenditure of funds must be adjusted to encourage the utilization of lower cost services and to prioritize services for higher need consumers; (2) the State must provide additional funds; or (3) difficult decisions about cutting services or excluding populations must be made. NC's system did not have a systematic way to determine which option was most efficacious and which resources to adjust and how. The Gap Analysis should be considered a baseline of information, a "point in time" (SFY 2005) snapshot of service delivery within NC.

The collective impact of Long Range Planning changes on total system-wide costs to bring the NC MH/DD/SA system to treated prevalence rates at the national average, to downsize state facilities, and implement new evidence based practice, to sustain population growth and the economic increases the system is currently facing will be \$2,731,014,925 over a five year period: the difference between Actual Costs in 2005 of \$1,960,371,957 and the EBP Model in 2010 of \$4,651,931,354. This is an average additional cost of \$546,202,985 each of the 5 years, FY2006 - FY2010. Approximately two billion of this projection is the cost for providing an appropriate continuity of care or "dosage of service" Actual State Facility costs in 2005 were \$561,598,799. They are projected to be no greater than \$521,784,363 in 2010. Models were adjusted for population increases, prevalence, cost of living and additional services that are brought on line. There were no adjustments made for any dollars added to the system after the 2005 data was analyzed.

The NC MH/DD/SA system has many positive elements, some recognized nationally. The purposes of this report however, are to elucidate those areas in the system that need improvement suggesting methods for "fixing" problems. Following is a brief summary of key gaps to address in long range planning:

- The major problem in NC at this time is that even for North Carolinians receiving mental health and substance abuse services; many do not receive an adequate **continuity of care**. As demand increases, continuity of services - as measured by number of visits per year - is declining. Most significantly, services of all kinds are not available with the appropriate intensity and consistency to produce the outcomes this State desires in people's lives.
- A **culture** that supports, in the broadest sense, recovery which is the manifestation of an individual's hope to move forward with his/her life despite the intrusion of a disability. A shared vision of recovery is essential for system change and improvement.
- To implement a strong system the State must provide leadership with clear and enforceable policy parameters that are communicated through administrative rules and contracts. The State should establish community policy positions in **Rule** which will promote enforceable equity and quality system wide.
- The **service amount and type** are slightly higher than national averages for persons with DD, near average for children with SED and are below national averages for persons with mental illness and very low for persons with substance abuse disorders thereby increasing hospital and residential admissions unnecessarily, and sustaining resources in restrictive care that could be shifted to community-based services.
- An emphasis should be placed on raising the **treated prevalence** for persons with mental illnesses and persons with substance abuse disorders, but also increasing programs that cross all disability groups that need to be implemented or strengthened. These areas include EBPs specifically related to work, housing and increased family support and education.
- There is **inequitable utilization** of services across regions within NC.

- The **service array** is over reliant on facility or bed based services, out-of-home placements, traditional outpatient therapies, and relatively long term “day- type” programming and other “center-based services”.
- While the State is invested in implementing Facility Based Crisis Centers, given the rural population in NC, these Centers will not be economically feasible except in urban areas. Non urban areas would be able to sustain a **Mobile Crisis Team** and a residential setting for up to 6 beds for Detoxification and Crisis Stabilization.
- In NC, **State Hospital care** is often provided as a first option rather than a last resort. State Hospitals appear to fill the void of community-based crisis. For every 1,000 North Carolinians, 1.26 will receive state hospital treatment compared to the national average of 0.62 per 1000. Continuity of care supports are insufficient to ensure system effectiveness. Community Detoxification services are limited for assisting individuals with a history of substance abuse. These two factors cause increases in State Hospital use. If NC truly wants a community based system it will have to make difficult policy decisions that are enforceable regarding the “front door” to state hospitals. For the most part SA and MH populations are not receiving care that is intensive enough to prevent state facility use and promote the community outcomes NC says it wants. Data shows that the State needs a reasonably aggressive rate of State Facility downsizing to stay ahead of population trends and economic increases.
- **Rural residents** are getting the least service.
- Despite the fact that NC purchases Evidence Based Services they are not consistently available and are not applied based on **fidelity models** consistently across the state.
- The State needs administrative rules that clearly set **enforceable coordination of benefits policy** at the local level so that private insurance is routinely billed before public dollars are expended and people that are not eligible for Medicaid are assessed for their ability-to-pay with strong efforts to collect reimbursements.
- There is currently no statewide mechanism for LMEs or other primary service providers to know when persons in their care enter a crisis state or **emergency services setting**. This lack of information results in poorer care than desired, frequent hospitalization, and less care coordination. NC Needs to improve screening in the emergency room to identify alcohol or drug disorders and mental illness; strengthen linkages between the emergency room and the chemical dependency and mental health treatment systems to increase penetration rates, especially for alcohol or drug treatment
- The system is **growing haphazardly** in a free market kind of way without planned attempts to assure services are available and adequate throughout all parts of the State. Discrepancies, discontinuities, and inequities are exacerbated by the fact any provider that is able to meet standards can provide care and bill for services. This will ultimately result in failed provider systems and providers who refuse to treat the indigent population.
- Local LMEs are not in a position to coordinate and manage services through a **preferred network**, thereby presiding over a fragmented system design that does not allow for capacity/efficiency analyses or for good coordination of care.

This will ultimately result in provider failures and disruption of care for consumers and their families. There is no comprehensive report of service capacity or mechanisms to define capacity.

- Division monitoring and technical assistance requires additional work which cannot be effectively pursued with **current levels of staff**.

For purposes of this report, the Division asked for Piedmont LME and its Counties to be excluded from the actual analyses and model. However, Piedmont data will be incorporated in the other Evidence Based Practice Models. Claims data paid through May 2006 for service provided July 2004 - June 2005 (SFY2005) were utilized. The data available included only claims submitted to the State. Therefore, it is extremely likely that the service units purchased with local dollars and not reported could have an effect on the findings of this report. The degree of such an effect is unknown. The State, LMEs and Providers need to recognize the need to collect all service data regardless of payer so that the true picture of the NC system of care and supports can be known and used in decision making. Additionally, the authors recognize that some practices such as intensive in home services were being billed under other available codes that may have artificially inflated some service category data. Service codes were not available during that fiscal year to submit claims for certain Evidence Based Practices (EBP) being implemented in the field.

Given the number of variables which interact to produce an effective MH/DD/SA system, complex mathematically driven modeling was necessary; so that elements could be readily configured or re-configured by the State to accommodate varying sub geographical regions, local variability and circumstances, and accommodate separate service coverage for different eligibility groups. The model took the following basic equation relating utilization to cost and repeated it for every specific service, and for each combination of disability, age group, funding source, county, and LME.

Total Cost of Service ABC = (# of Users of Service [x]) X (# of Units of Service [x] per User) X (Cost per Unit of Service [x]).

The first model that was built, called the "Actual Model", reflects current levels of service volume, intensity and costs. It provides a baseline against which various alternative scenarios or alternative models can be compared. These Models allow the State to build alternative Models based upon the "realities of political will". As state funding varies, the Division needs a mechanism to alter the coverage under the non-Medicaid plan, which these Models provide. Likewise the State may use modeling to adjust benefit levels and cost if CMS and/or the State cannot afford the current coverage. In all three models Medicaid is presented as a "whole dollar" and the State's and local share of Medicaid are not broken out separately from the Federal share.

In summary, what are presented here are three models;

- The Actual Model that represents 2005 actual practices, based on actual data,

- An Evidence-Based Practice (EBP) Model that would bring NC to national averages for treated prevalence across populations and increase the continuity of service, thereby allowing for a significant reduction in State Facility use, and a
- A Defined Benefit model that originally was designed to reduce state cost or contain them by limiting the scope, amount and duration of service. The State preferred, for this initial presentation, to limit service eligibility requirements rather than the scope, amount or duration of service.

The Actual Model is based on actual claims data for FY 2005. The second Model reflects an "Evidence Best-Practice" approach where the scope and intensity (frequency and duration) of service was based on research reflecting best-practices; community-based service packages that honor self-determination, family resiliency, recovery principles, and cultural sensitivity for target populations. This scenario reflects what it would cost if all desired services were provided with the appropriate intensity.

Alone, Best Practices might be impossible for the State to fund. However, coupled with an incentive base to limit state hospital use by providing sufficient community based services and recognizing the fact that many of the community based services would result in increased Federal share as best practices were increased in the community, the State's cost could be reduced significantly. The Models "phase in" EBP services while reducing those services that are not as effective until the ideal state is reached in 2010.

The Best-Practice Model was utilized as the basis for projecting costs, based upon start-up, phase-in and correction of gaps, including goals the State has for increasing prevalence and implementing evidence based practices. While best practices reduce state hospital use, there is a direct significant positive correlation between increased treated prevalence and admissions to state hospitals. This could explain in part why the State has seen more state facility admissions but reduced bed days. Often people entering the system require immediate inpatient care that may not ever be repeated or may be for a short duration. Alternatives are needed at the front door. For each year, 2006, 2007, 2008, 2009 and 2010 the EBP model demonstrates what it would cost NC if all desired services were provided with the appropriate intensity.

In the "Defined Benefit" scenario, the Model has been initially populated to calculate costs on a sub-set of the target population rather than on the scope, amount or duration of service. Reduced scope, amount and duration are also options but are not favored by Division staff given consumer movement between Medicaid and General Revenue benefit plans. When the likelihood is apparent that an individual will qualify for Medicaid, they should be started in appropriate services that will later be available through the Medicaid Plan. When it is clear because of the lesser degree of disability or an income status that prevents an individual from qualifying for Medicaid, they must meet restricted eligibility criteria. In many cases this may include assessment only to rule out significant disability that would qualify the individual as a member of the "Target Population". Several assumptions are made including the fact that a percentage of consumers will

receive Medicaid after the first 90 days and that payment is often retroactive. Others may never qualify for Medicaid.

The Models contain elements that can be readily configured or re-configured by the State to accommodate varying sub geographical regions, local variability and circumstances, accommodate separate service coverage for different eligibility groups and as state funding varies, provide a mechanism to alter the coverage under the non-Medicaid plan.

Organization

The report is organized as follows:

Chapter I – Methodology

In this section the work processes are described including sources for data, data analyses, and preliminary agreements on classifications and constructs used in the study and in building models for the future use of the Division.

Chapter II – Foundations

This section will establish the foundation to address MH/DD/SA Service Gaps. The elements of good service design are reviewed including an analysis of consumer needs; core principles and policies; and a vision of the outcomes to be achieved for each disability group. Terms of entry (service eligibility), terms of intensity (frequency and duration) and terms of cost are considered to create an optimal, overall system.

Chapter III –Population, Prevalence & Treated Prevalence

The services needed at the community level within each County/LME/Region to ensure an adequate level of services to the average number of persons needing the services based on population projections are described through service utilization data analyses; prevalence and treatment prevalence rates for the state, regions and counties; including state to state comparisons.

Chapter IV – Service Utilization

In this section the continuum of services needed for each disability group within a local management entity (LME) are described and quantified, addressing: the capacity of NC's Community Based System, the available service array, a service continuity factor, county by county availability of Evidence Based Practice (EBP), service intensity and the level of service provided, Screening, Triage & Referral (STR).

Chapter V - Projected Start-up & Total Funding Needed

This section presents and discusses findings of the EBP Stochastic Models that were initially based on 2005 claims data, The review incorporates a "Cross Over" factor for analyzing services that might be shared what percent of the population each LME would expect to use state-level facilities; and the gaps that exist within each County and LME for each disability group. For each year this section presents a model for start-up and the total funding needed over a five year period from the Trust Fund for Mental Health, Developmental Disabilities and Substance Abuse Services and Bridge Funding Needs

to implement the long-range plan. The Models contain elements that can be readily configured or re-configured by the State to accommodate varying sub geographical regions, local variability and circumstances, accommodate separate service coverage for different eligibility groups and as state funding varies, provides a mechanism to alter the coverage under the non-Medicaid plan. The Models reflect through 2010 what it would cost if all desired services were provided with the appropriate intensity.

Chapter VI – Conclusions & Recommendations

The findings and recommendations described above are summarized and we hope they will assist NC in improving its system of care for adults and children with MH/DD/SA needs and in utilizing limited public dollars in the most efficient way possible.

Chapter VII – References & Resources

Most references are incorporated in the body of the work and key references only are presented in this chapter and do include all documents reviewed.

Consultant Qualifications

Heart of the Matter Consulting, Inc. is owned by Christina Thompson Ph.D. who has worked in the public mental health field since 1974. Her experience has been progressive including clinical experience with every service population both directly and in a management capacity. She developed best practice protocols for persons with mental illness and persons with developmental disabilities that have been purchased by a generally wide market. She was chairperson of the State Board of Psychology in Michigan for 6 years, appointed by the Governor. Dr. Thompson also co-chaired the committee that made major revisions to Michigan's Mental Health Code resulting in increased consumer rights and the closure of numerous institutions. Dr. Thompson worked for the State of NC as its reform efforts were being initiated. Those efforts included training state staff, creating mechanisms for evaluating LBPs, participating in those evaluations, writing the LME contract, working on service definitions, evaluating state operated services provided to children, leading the State's efforts to develop a child mental health plan, and working with a stakeholders group to develop a hospital/LME collaborative agreement.

Drs. Broskowski and Thompson have worked jointly on other similar projects in a number of states. Dr. Broskowski (Pareto Solutions) provides extensive consultation on utilization and financial modeling to state and local level payers and providers. Pareto Solutions has extensive experience with Medicaid mental health and substance abuse utilization and risk analysis, as well as managed care principles applied to mental health, primary health care and child welfare systems using principles of modeling and risk-based financing. Dr. Broskowski has published over 70 articles, book chapters and one book (Linking Health and Mental Health). He is knowledgeable and experienced in areas of health, mental health, substance abuse, and child welfare service delivery systems and program models, service utilization and cost management systems, psychiatric epidemiology, program evaluation, management information systems, organizational design, and general management functions. Dr. Broskowski has received major awards for research and managerial leadership. He currently serves as

a consultant to federal and state agencies and national research and technical assistance centers on such issues as modeling administrative and service costs in public and privatized mental health and child welfare systems; design of capitation and cost-effective service delivery systems for severely disturbed children and adolescents, child welfare privatization, case management methodologies, and development of planning, management, and evaluation systems.

Mr. Thompson, the third consultant on this project was the Chief of the Mental Health and Social Services Data State Department in Topeka, Kansas. He then worked for 20 years as the Chief of Biometrics for Genesee County Community Mental Health in Flint Michigan. Mr. Thompson designed and implemented a comprehensive MIS system for all levels of Administration which included, Computerized Clinical Systems, Medical Records, Financial Analysis, State and Board Reporting on service utilization data and costs, Statistical Analysis for system needs including demographic mapping and prevalence and incidence with feasibility studies for new programming and Research Studies on the effects of specific mental health applications.

All three individuals have many years experience in a variety of projects relating to mental health public policy and management, quality improvement and performance measures, modeling costs for transition of services in the public sector, privatization, managed care, and public sector data analysis.

Background

With 8,049,313 residents in 2005, the state of NC was the 11th largest state in the nation and experienced rapid growth in the past decade. As NC's population grew, so did the number of individuals in need of MH/DD/SA services (i.e. prevalence). By 2010 the population is expected to grow 15.8%, an increase of 1,268,328 people. However, funding over the past decade has not grown in conjunction with the increased demand for community MH/DD/SA services. MH/DD/SA transformation efforts have resulted in increased persons served from 300,245 in 2000 to 337,676 in 2005, an 11.1% growth projected to be 388,665 by 2010. NC's treated prevalence rate and the per capita spending for persons with developmental disabilities is ranked 27th in the nation. Nationally in FY 2005 the average expenditure for ICF-MR services was \$57.89 per U.S. resident and \$30.74 per NC resident. In 2003 the state of NC ranked 43rd nationally in per capita expenditures for mental health and substance abuse services and 45th in 2004.

In the midst of a national health care crisis and state budget reductions, the staffs that form the public mental health system in NC remain dedicated and steadfast in their mission. The following findings summarize many of the primary gaps both in type and volume of services within the public mental health system in NC and make recommendations for intermediate and long range planning. Creating a statewide system of Evidence-Based Practices (EBPs) is most certainly unaffordable for the State at this time. This means that the State is faced with tough policy decisions that will need to be implemented if the system is to gradually introduce EBP and meet its goals for increased access and increased treated prevalence. The State, like most others, is

faced with increasing demand and therefore costs in its MH/DD/SA system. Despite many obstacles, the limitations and gaps in the system could potentially be much larger if it were not for NC's most valuable asset: its administrative and clinical state and community workforce and tireless advocates.

Chapter 1 - Methodology

The Gap Analysis was conducted off site with telecommunications and occasional on-site meetings. The following steps were taken in development of the tools, models and analyses:

- The current service delivery system, coding and service definitions were thoroughly reviewed including major documents and both Department and Division Communications produced in the past 5 years
- As a starting point the Division leadership and consultants reached consensus on a set of outcomes for the evaluation of effective service delivery.
- The leadership of the Division and the consultants also reached consensus on a set of policy drivers
- These policy parameters and possibilities were presented to the External Advisory Team with an overall summary of the project at hand.
- A framework was established to build three types of models and analyze gaps in services. The parties reached agreement upon a typology of operational definitions (i.e. defining significant variables used to classify consumers, clinical cohorts, cost and service utilization at a level of specificity that allowed each function to be quantified). These specifications included defining two payment sources (Medicaid and State General Revenues), three consumer disability categories (DD, MH and SA) and 4 age groupings (0-18, 19-21, 22-64, 65+), resulting in 24 (2X3X4) independent cohorts to be analyzed for utilization and cost information.
- It was agreed that data would be organized by these 24 cohorts for each county in NC, with the exception of the Piedmont LME, which was not included in any of the data analyses.
- From this typology, the data set was defined and extracted for analyses. Based upon 2005 data, services were grouped by type and agreed upon. Procedure codes were reviewed to ensure consistent application of the data extract.
- Three models were developed, each of which incorporated both community-based service use as well as the use of state facilities.
 - The first model, called the **Actual Model**, was calibrated to correspond to FY 2005 service use and cost patterns;
 - The second model, called the **Evidence Based Practices** or EBP Model, was designed to reflect potentially new types of EBP services being introduced, some of the current less effective services being reduced or eliminated, as well as projected reductions in State Facilities;
 - A third model, called the **Defined Benefit model** was designed to reflect a minimum set of services and limits on service units that could be used to project costs in serving the non-Medicaid population in NC. The model can also be modified, as it has in this report to adjust the population served by bringing all counties to within a given percentage of treated prevalence. In essence, this adjustment has the effect of reducing the numbers of people served that do not meet "Target Population" criteria or who are not severe enough to warrant priority entry to the system.

- A “Continuity Ratio” was defined as the ratio of the Monthly Average Caseload (M) to the Total Annual Caseload (T). This ratio is a general reflection of a consumer’s continuity of care during the year. As M increases relative to T, it would mean that consumers are receiving services more months in the year. For example, when $M/T = .5$, consumers are receiving, on average, services for 6 months out of 12 months. Since persons to be served are those with more serious forms of disability, one would want to see relatively high levels of continuity throughout the year. At the same time, as continuity increases, it is difficult to increase the total number of cases served by bringing in consumers new to the system without increasing the capacity for more service (assuming current capacity is being fully utilized). In other words, working toward a goal of increasing treated prevalence (the percentage of persons served from among those who have a disability and need care) can be done in two ways: reduce continuity of service for existing consumers to make room to serve new consumers, or increase the total number of unique persons served while maintaining or increasing continuity of care for all consumers
- Treated prevalence rates for each of the primary cohorts within each county and LME were compared to statewide treated prevalence rates and the Models were designed to allow new financial projections based on adjustments to the treated prevalence rates and the monthly average caseload size (i.e. the continuity ratio) based on the Division’s goals to gradually increase treated prevalence and maintain continuity of care through the fiscal year 2010.
- For the Actual Model we began with an agreement between Division leadership and the consultants of a Master Service list that was used to guide data extraction and analyses. The final list for the Actual Model contained 26 services representing a consolidation and grouping of over 250 unique procedure codes. We made no attempt to convert to “comparable” units. For example, outpatient includes “CPT” codes, where units are typically an event, and “HCPCS” codes, where units are typically based on units of time.
- For the Actual Model, the numbers of persons using services (Organized according to 1 of 24 cohorts, were extracted for the State fiscal year 2005. Data was further broken down by the type of service used, the person’s county of residence, and the source of service cost payment (Medicaid or IPRS).
- Based on actual costs and service units provided, the average unit costs for each service were calculated.
- This actual 2005 service utilization and cost data for each of the 24 cohorts was used to populate the Actual Model.
- Each Model incorporated a Master Summary Report organized according to the 24 cohorts that reported on total costs and units for each cohort and included calculations related to prevalence, treated prevalence, and service continuity for each cohort.
- Each Model incorporates a Summary by Disability as well as Summaries by Service, Counties and LMEs that present totals costs and units for each service and makes per-capita calculations related to the cohorts and their combinations.
- Consensus was reached between Division leadership and the consultants on the amounts and duration of services to be incorporated in the EBP Model as well as

those used to populate the Defined Benefit Model. The EBP Model was populated to reflect less reliance on ineffective services as well as an increase in the use of EBP. The Model was populated for each of six years (2005-2010) based on a consensus among Division leadership and the consultants regarding the policy parameters and timelines for phasing out ineffective services and for introducing new services and requiring increases in treated prevalence throughout the State. The Defined Benefit Model reduced the population served by a County when it was serving more than 10% above the average treated prevalence as an initial step in limiting benefits. The Model can be further defined to limit the amount, scope or duration of service as the State examines its priorities and policies.

- Switches were established in the Models to allow instant grouping of counties or LMEs as a tool to determine the most effective patterns of services to be established within each LME and those services that were most cost effective to share among LMEs.
- Utilizing demographic and social indicators, comparative data from other states and prevalence data on the general population related to risk factors, system capacity was analyzed.
- Model projections were run under various scenarios to determine where there were gaps in service, which services should be shared across LMEs, and to project expenses, population increases and increased penetration over a five year period beginning in FY 05-06.
- Model projections were also performed to suggest alternative configurations of counties into LMEs. The Results of the Model's projection of costs over 5 years, and alternative LME service configurations were documented and mapped.
- Model projections were compared against the historical service use data to identify gaps in services, over and underutilization of specific model services or services that are not EBP but being utilized with negligible promise of positive outcomes or reductions in hospital usage.
- The need for additional services was estimated together with the cost from the three models and their interrelated patterns of utilization and treated prevalence by county.
- Maps were developed for the Division to compare the services currently available with services needed.
- Recommendations were made for the Division to strategically enhance selected services to achieve the greatest impact on the MH/DD/SA service system.
- The MH/DD/SA workforce for community based services was reviewed to identify issues related to capacity, recruitment and retention of staff.
- The Public MH/DD/SA System in NC was compared to that of other states.
- Updated information was found in response to a stakeholder request relative to DD Prevalence. The US Census Bureau Data was utilized – National Health Interview Survey's Disability Supplement- but was updated to reflect the development of and application of operational definitions of DD and MR in the non-institutionalized population completed in April of 2000 at the University of Minnesota. As a result major rework was required on the project as the differences were statistically significant.

- Meetings were held with the External Advisory Team and their feedback was considered in the redraft of the document chiefly related to the comparisons and contrasts among disability groups versus within disability groups.
- Division leadership staff reviewed the document, submitted suggestions for improvements which for the most part were incorporated.
- The document was reviewed in total one week prior to the December LOC and many changes, some major efforts were required. Likewise, the Models are just now undergoing review and as a result of “tire kicking” will require adjustments before further analyses are run by the Division.
- The consultants recognize that complying with the RFP structure required models for the years 2005-2010 even though the state is entering the 2007 year. The Models can be used to titrate system changes and may be implemented starting with the model closest to the current practice of the system which pushes the reform effort forward.

Chapter II – Foundations

In this Chapter you will find for each disability group the following:

- ☑ Foundations
- ☑ Policy Implications
- ☑ Outcomes Desired
- ☑ Components of an Ideal System of Support

Establishing the Foundations to Address Service Gaps

Gaps in service are defined by differences between Best Practice utilization and Current utilization in this project. The initial Gap Analysis should be considered a baseline of information, a “point in time” snapshot of service delivery within NC. The predictive models for subsequent years provide a glimpse of future gaps. However, in order to reap the benefits of this information and data analysis, NC must conduct similar analysis on an ongoing basis. This will enable NC to measure the extent of success in improving access and quality of services both in the community and in state operated facilities.

NC has already made adjustments to the type of data collected on community utilization in order to conform to SAMSHA goals and requirements. There are, however, several gaps in the system’s infrastructure that impede the collection of data necessary for performing regular gap analyses at this time. These issues are primarily related to LME Contract performance indicators, capacity reporting and service reporting of all units regardless of payer, including emergency services, which need to be addressed if the state wishes to collect appropriate, accurate and sufficient data to perform ongoing gap analyses routinely.

The desired service configuration had to be selected before forecasting and cost strategies could be finalized. Although there is no one correct approach, there are three initial elements to good service design: 1. Analysis of consumer needs to concentrate on practical services that are likely to be acceptable; 2. Base new service design on well-defined, carefully selected core principles/policies; and 3. Start with a vision of the outcomes to be achieved and select services that will accomplish them. Secondary elements critical to initial service design includes decisions regarding: Terms of entry (service eligibility), Terms of intensity (frequency and duration) and Terms of cost. Consideration of all of the above factors was important to avoid single-category thinking and to create an optimal, overall system.

The World Health Organization had ten recommendations to address the mental health treatment gap in their 2001 report:

- Mental health treatment should be accessible in primary care
- Psychotropic drugs should be readily available
- Care should be shifted away from institutions and towards community facilities
- The public should be educated about mental health
- Families, communities and consumers should be involved in advocacy, policy making and forming self help groups

- National mental health programs should be established
- The training of mental health professionals should be increased and improved
- Links with other governmental and non governmental institutions should be increased
- Mental health systems should be monitored using quality indicators
- More support should be provided for research.

The New Freedom Commission on Mental Health, established by the federal government in 2002, has developed a Federal Mental Health Action Agenda to promote full access to community life for people with disabilities. It includes a focus on:

- Desired outcomes of mental health care, which are to attain each individual's maximum level of employment, self-care, interpersonal relationships, and community participation.
- Community-level models of care that effectively coordinate the multiple health and human service providers and public and private payers involved in mental health treatment and delivery of services.
- Policies that maximize the utility of existing resources by increasing cost-effectiveness and reducing unnecessary and burdensome regulatory barriers.
- Use of mental health research findings to influence the delivery of services.
- Promotion of innovation, flexibility, and accountability at all levels of government.

The Home and Community-Based Service (HCBS) Waiver Program from CMS, in collaboration with the NASDDDS and others, has adopted a Quality Framework to focus attention on participant-centered outcomes along seven dimensions. These include:

- Access to home and community-based services and supports in their communities.
- Participant-centered service planning and delivery
- Sufficient numbers of capable providers.
- Safeguards to ensure participants are safe and secure in their homes and communities.
- Support for participants to exercise individual rights and accept personal responsibilities.
- Achievement of desired outcomes and satisfaction with their services.
- An effective and efficient system that constantly strives to improve quality.

The Substance Abuse and Mental Health Services Administration of the U.S. Department of Health and Human Services (SAMHSA) has developed the following 10 National Outcome Measures (NOMs) in collaboration with the States. These domains are designed to embody meaningful, real life outcomes for people who are striving to attain and sustain recovery; build resilience; and work, learn, live, and participate fully in their communities. The development and application of NOMs is a key component of the SAMHSA initiative to set performance targets for State and Federally funded initiatives and programs for substance abuse prevention and mental health promotion, early intervention, and treatment services.

- Reduced Morbidity (for substance abuse—abstinence from drug/alcohol use, including decreased use of substances of abuse, nonuser stability, increasing

perceived risk, increasing disapproval, increasing age of first use; for mental health—decreased mental illness symptoms)

- Employment/Education (getting and keeping a job; workplace drug and alcohol policy; alcohol, tobacco, and other drug school suspensions and expulsions; or enrolling and staying in school)
- Crime and Criminal Justice (decreased criminality, incarcerations, and alcohol-related car crashes and injuries)
- Stability in Housing (increased stability in housing)
- Social Connectedness (family communication about drug use, increasing social supports and social connectedness)
- Access/Capacity (increased access to services/ increased service capacity)
- Retention (for substance abuse—increased retention in treatment, access to prevention messages, evidence based programs/strategies; for mental health—reduced utilization of psychiatric inpatient beds)
- Perception of Care (or services)
- Cost Effectiveness
- Use of Evidence-Based Practices

The National Association of State Directors of Developmental Disabilities (NASDDDS) assists member state agencies in building person centered systems of support for people with developmental disabilities and their families. The NASDDDS provides guiding principles which reflect the position of the membership that individuals with developmental disabilities have the right to:

- Be treated with respect and dignity,
- Be independent and make individual choices,
- Participate in family and community life,
- Have opportunities to maximize their full potential, and
- Receive outcome based services and supports.¹

Policy Decisions

The NC Long Range Plan is basically seeking decisions regarding the “coverage” the State can afford to offer for the maximum outcome benefit. The difficulty in making these decisions may come from a fear of litigation and backlash by the public or knowing the dollars just won’t stretch far enough. Also there are a number of issues to consider in making the decisions: the outcomes desired, policies underlying decisions for the criteria and limitations to be used and their potential benefits, and cost savings. It is also critical that all parties see the equitability across the system. No one disability group “deserves” more than another.

In designing the “Ideal Model” there must be consensus on certain basic policy. NC Department, Division and local LMEs have strong beliefs about the principles needed to implement a best practice system. However, there is considerable disconnect between what is implied policy and what is established policy. To truly implement a strong system the State must provide leadership with clear and enforceable policy parameters

¹ NASDDDS Strategic Plan June 2006

that are communicated through administrative rules and contracts. Currently there are no administrative rules that clearly set enforceable transformation policy at the local level. Making changes to statutes in a piecemeal fashion is not effective and can result in fragmented results. The promulgation of rules is a technical, tedious and complicated process that cannot be completed quickly. The Division has the authority to adopt rules regarding the "Standards of public services for mental health, developmental disabilities and substance abuse services." In addition services provided by area authorities, county programs and all private providers using public funds are covered by such rules. The Division has initiated a process to review existing Rules.

As a place to start in developing the Models the Division leadership and the consultants reached agreement on a set of policy statements that are minimally necessary in designing the system. Policies are the foundation upon which the insurer (the state) decides which procedures to offer and what criteria and limitations are to be used. Coverage policies describe the steps and indications that a practitioner must follow for a service to be approved under the plan. There may be indications of severity or intensity described in a coverage policy or certain services and treatments, such as those that prevent the worsening of a condition or that allow an individual to maintain or promote functioning. It is possible, in other words, for the definition to exclude any procedures that, in the view of the insurer, do not yield the desired outcomes or result in what the insurer considers a significant short-term improvement. The information in coverage policies is developed or adapted from other sources and research by each plan and may include evidence of effectiveness of the support or treatment, severity, symptoms, conditions that might disqualify an individual for the service, pre service requirements, other supports or therapies that must accompany a requested service, and plan policies or procedures that are related to the approval or denial process for a specific treatment or intervention.

NC in its State Plans and Service Definitions has largely decided upon coverage, eligibility (and all the conditions that go with eligibility such as diagnosis) and the services that may or may not be provided simultaneously. As is the case in many states, the criteria specify broad evidence-based tests of medical necessity including,

- The service is necessary to meet the basic needs/health of the consumer;
- Services are rendered in the most cost effective & least restrictive manner weighing safety & effectiveness;
- Services must be sufficient in scope, frequency & duration to make a difference;
- Services must be consistent with the diagnosis of the condition;
- Services must be for reasons other than the convenience of the consumer or his/her caretaker;
- Services are reasonable to reduce significant disability;
- Services assist in maintaining functional capacity.

Whether the State has clearly articulated these principles is inconsequential for the Medicaid program because the Code of Federal Regulations has specified them and so one might assume them. However, these statements alone do not do much to reduce

liability and standardize practice because they are so broad and subjective. Medical necessity is actually a Platform of "principles" that should pervade the entire "system" of decision making, from the establishment of coverage categories and policies to the individual decision about what intervention to cover. In an ideal system, the individual decision and the coverage policy should be consistent with the principles and definitions in state law, administrative rule and in contracts with management organizations. The NC MH/DD/SA Laws of 2003 in 122C-143.1 provide the door for policy guidance. The statute also makes it clear that "equal accessibility" shall apply for people regardless of geographic location. The Statutes further require that Area Authorities have business plans that are consistent with the State's "long range plans". In many of its documents the State has embraced many of the policy positions mentioned here. However, the State does not appear to have official policy positions on the following statements but has agreed that a benefit design should be based upon these principles and "policies".

The Budget is the single, most powerful expression of a state's priorities. The MH/DD/SA budget is a large part of the State Budget which of course is a political process with many competing interests. If policy were clarified, some of the process could be unbundled. It would be far better to fund policy than continue to create special funding categories. Funding by policy provides a more equitable and better return on the investment of the public taxpayer. The goal is to aim for coverage that saves dollars while providing quality care based upon a strong set of policies that will also reduce liability for the State and enable the State to hold area authorities and private providers using public funds accountable.

The following constitute potential policy statements for the adequacy of the service continuum.

- In general, people recognize the limitation of resources; the aim to implement best practice and acknowledge that public managers should say "no" when it is necessary, consistent and equitable.
- There is a generation gap that places families on opposite sides of many issues and results in entirely different estimations of consumer ability. This gap requires the public manager to transition some services that are no longer best practice in a planned but slower way than one would normally implement change.
- More than anything, it is important for consumers and families to know that people care, that they believe in consumers and that they have time for them.
- Building a system of chosen supports, treatment and services that makes it possible for people to live meaningful and satisfying lives in their community is a gradual process influenced by foundation building, system improvement and new service development. The changing system must continue to provide needed services to people without interruption during the change process and support them through transition periods.

- While reducing reliance on institutional care, a philosophy of person-centered support and services aimed at real life outcomes must be implemented through evidence based and best practice models that are proven to achieve the desired results in a cost effective way.
- These actions must be framed by a culture shift at all levels of the system. People working side-by-side with consumers and families must become more customer oriented and actively demonstrate their caring and professionalism. Providers must demonstrate accountability. Consumers and families must adjust their expectations to include less segregation, new models and to incorporate community and natural supports in lieu of or in addition to paid supports.
- Best practice has a person/family-centered focus on the goals and outcomes identified in each selected life domain of the person with the disability. In any field, best practices are those activities that are responsive and effective, particularly in the experience of the individual. This means that their use must be based on a track record of success and that their value must be clearly evident through research.
- The State Plan requires that services be provided and developed within a self-determination orientation utilizing a least restrictive, community inclusion approach. Service strategies assist the consumer in attaining the outcomes he or she identifies as important and desirable within selected life domains. Domains focus on where people live, work, recreate, obtain health care and educational services. Within each of the domains, service strategies are applied including:
 - Personal development,
 - Self-determination,
 - Community Integration
 - Ownership
 - Coaching and mentoring,
 - Exposure to choices,
 - Supports,
 - Assistive technology
 - Medication

Finally, the following is the Division of MH/DD/SA's present intent for evidence based best practices that are cost effective and produce the agreed upon outcomes that fit with the adopted policy positions. Most of the bases for policies are in State Plans and the Blueprint for Change and the Division utilizes Communication Bulletins, however their enforceable status is questionable. The State should establish these policy positions in Rule.

General Policy Parameters:

- Statewide equity regardless of funding source is preferable. (Offering like services with differences only in scope and duration to accommodate funding limitations is preferred)
- State dollars should not be used to supplement a Medicaid plan as they are needed for indigent care
- Urgency of a condition (e.g., dangerousness to self/others) should take precedence in service provision
- The most severe should be treated first
- Resources should be allocated by considering the extent of suffering experienced by consumers. (May require utilizing a Level of Care system of some sort)
- The State wants to apply the principle of the greatest good for the greatest number.
- Money spent should produce desirable outcomes in the lives of consumers.
- Providers and Area Programs will be held to administrative and service outcome indicators. Plans of Correction will be required for unfavorable outcomes.
- The service must be provided in sufficient quantity and duration to reduce symptoms or maintain functioning level. When results are not seen, the care should be reviewed and other options considered.
- A requirement for community & natural supports to supplement services should be set. For example there will be an expectation for community reintegration and support.
- External specialists' opinions cannot override system coverage decisions.
- The State shall move toward a Standardized assessment to ensure state-wideness of eligibility determination
- The State will adopt severity and intensity requirements to influence state-wideness in the application of resources.
- The State will compare the potential benefit of a procedure to health & safety risks.

Marginal Cost Policy

- Strengthen the System of Care for Children to reduce costs in all systems working with children and families
- Implement pre-booking and corrections diversions programs for adults and juveniles to reduce consumer trauma and corrections costs.
- Integrate medical care and mental health care through sound care coordination strategies.

System Revenues and Consumer Resources Policy

- Monitor 1st and third party receipts at Area Authorities to increase system revenues
- Require parents to use child SSI funds to pay for room and board or purchase room and board out of pocket.
- Implement and enforce ability to pay collection of information at admission.

- Monitor the extent to which people are assisted in gaining entitlements and other resources that assist in paying for their care and to reduce the amount of time consumers are removed from Medicaid unnecessarily.
- Adopt a statewide Ability to Pay Schedule based on NC taxable income and number of dependents.
- The State evaluates mechanisms for Spend down to avoid consumers losing services
- The State adopts a mechanism to allow consumers to work without losing Medicaid eligibility, perhaps through a “buy-in” approach.

Prevention Policy

- Benefits shall include engagement effort practices to improve consumer compliance with treatment and to reduce “no show” rates.
- Evidence based SA indicated and selective prevention programs shall be provided in school and community settings for at risk youth and families early and often.
- Implement programs for children with disabilities and SED in integrated day care settings that are at risk of expulsion and reduce future MH/DD/SA costs.
- A service must be both practical & reasonable. Some services provide benefits by prohibiting more costly and restrictive care, but due to limited dollars may also have upper limits.

Best Practices Policy

- Implement the Supported Employment Model
- Implement Community integration in real settings. Implement inclusion programs utilizing natural resources. Increase community support with titration to Natural and community supports.
- Increase supported employment efforts – incorporating EBP for MH and DD - MH through Place and Train and DD through matching, tailoring, accommodating and follow along.
- Increase affordable housing and independent housing supports for adult populations
- Increase Peer Supported/operated services.
- Implement inclusive service settings for children.
- The State has implemented new service definitions and should have policy covering these practices including fidelity measures.
- The State should examine ways to utilize community supports and other appropriate Medicaid services as individuals enter integrated employment settings.
- The State is examining mechanisms to fold all SAMSHA Models into existing services except for ACT which should be a standalone service and dramatically increased to prevent hospitalization.
- Treatment or supports that are not covered in the state plan will not be provided, except in unusual circumstances, in which case the treatments and supports must not be experimental and must meet national standards of practice.

Reduce Reliance on Restrictive Care Policy

- Least restrictive care and Single entry to restrictive care must be enforced to reduce the inappropriate utilization of hospitalization.
- The State wishes to reduce the use of restrictive settings
- The dollars should follow the consumer through movement of a portion of state facility dollars to the community.
- Transfer (on some basis to be determined) State facility dollars (or provide seed money for expanded community programs) to area programs and hold them responsible for authorizing and purchasing state inpatient care.
- Services work best when provided in vivo, such as mobile crisis vs. facility based crisis. These services should be expanded.
- Provide only the therapeutic care in residential settings based on level of need.
- Implement more in-home programs and at certain LOC require in home services before placement and parent participation while in placement.
- Require transitional in-home services as a mechanism for returning a child already in residential care to the home environment.
- Utilize ADATCS for SA and reduce access to psychiatric inpatient care until the SA crisis has abated and there is evidence of a clear mental health condition requiring hospitalization.
- Expand access to Crisis Facilities on a regional basis with strict length of stay requirements to prevent hospitalization.

Based upon the typology, outcomes and policies agreed to, master service lists for each benefit scenario and by each population and age group based on EBP, service alternatives to State Facility and out of home care that promote the outcomes and the Ideal benefit packages were constructed

Outcomes

NC has adopted outcome indicators across all disabilities that are consistent with federal initiatives at SAMHSA and CMS, with principles articulated in the NC State Plans and other planning documents, and with NC Legislation. These outcomes include measures of:

- Increased abstinence from substance use
- Reduced problematic symptoms and behaviors
- Housing stability and independence
- Meaningful daily activities, including employment and education
- Community inclusion and social connectedness
- Timely access to and continuation in services
- Reduced admissions and readmissions to short-term psychiatric hospitalization
- Reduced involvement in criminal justice systems
- Increased use of evidence-based practices
- Improvements in consumers' perceptions of service quality and outcomes

NC should use its outcomes measures for systems improvement through report card methods. Currently NC-TOPPS, the Division's web-based system for collecting consumer outcomes information, is conducted statewide. It has received national

recognition and provides a strong platform for the collection of essential outcomes. In this regard NC has been ahead of other states in outcomes evaluation.

Service strategies

Service strategies are intended to promote the achievement of outcomes like these. In older practice models, strategies are bundled and become programs. Programs in and of themselves are not best practice, but reflect how we previously organized our resources. The goal is to utilize best practices and service strategies to achieve success in consumer selected life domains. In addition, to be effective these strategies must be accompanied by the following:

- People must be educated to talk about their disabilities and supports/services issues publicly,
- Professionals and families must be encouraged to use age appropriate and person centered language,
- Staffs working with consumers in public settings must avoid stigmatizing people in their approach to support,
- People receiving services who are old enough to retire should have choices and options to consider. What are appropriate programs for seniors and what level of involvement do consumers want and need?
- In addition, families need to plan for when caregiver parents are no longer around. The aging of our society, the increasing longevity of persons with all disabilities, growing waiting lists in the states, Olmstead and access-to-Medicaid services litigation, and the future of funding for services in the midst of our current economy are critical issues to face. These demographic, budgetary, litigation and economic factors impact state service delivery systems and challenge their capacities to meet current and projected demand for services and supports.

Components of an Ideal System of Support

There is a need to differentiate between service availability (offered by providers) and services for which the state recognizes and provides compensation for the treatment of disabilities (funded by state or Medicaid dollars). The provision of quality services and supports involves adherence to Evidence Based Practices (EBP's) and fidelity to those specific program models. To provide guidance in determining the future evidence based services and supports that will be provided through our public system, the Director of the Division of Mental Health, Developmental Disabilities and Substance Abuse Services has appointed 60 people to serve as advisors to the Division.

This North Carolina Practice improvement Collaborative (NC PIC) is a partnership between consumers, clinicians and researchers. Science will inform the provision of

services, and the experiences of consumers, family members, and service providers will guide research on future services and supports that might be provided.

The mission for the NC PIC is to ensure that each time any North Carolinian--whether a child or an adult, a member or a majority or minority, from an urban or rural area--comes into contact with the DMHDDSAS system will receive excellent care that is consistent with our scientific understanding of what works (New Freedom Commission on Mental Health, 2003).

Comprised of representatives of all three disabilities, the NC PIC will meet quarterly to review and discuss relevant programs. Annually, the group will present a report of prioritized program recommendations to the Division Director at a public forum. This forum defined as the North Carolina Practice improvement Congress, will feature brief educational descriptions of the practices being recommended by the NC PIC in its report.

The division will then evaluate the programs highlighted in the report for feasibility and cost effectiveness and determine a timetable for endorsement and adoption into the public system.

They also have a federal transformation grant that will focus on model fidelity. It is important to acknowledge that the infrastructure to provide innovative and effective community supports is in place. For myriad reasons, community providers do not offer the entire spectrum of services that could be delivered to individuals. The State needs Rule defining the continuum of service each LME is required to have. The state has built its continuum of services that can be offered in the community, but due to staffing issues, or low economies of scale, services that could be furnished by community providers are not being offered. Service benefits for persons with developmental disabilities are primarily lacking community integration and self determination options that can be accomplished within the existing framework and funding level.

Persons with Developmental Disabilities

In the Six State Study of HCBW (NASDDDS) services the majority offered the following types of services for persons with DD:

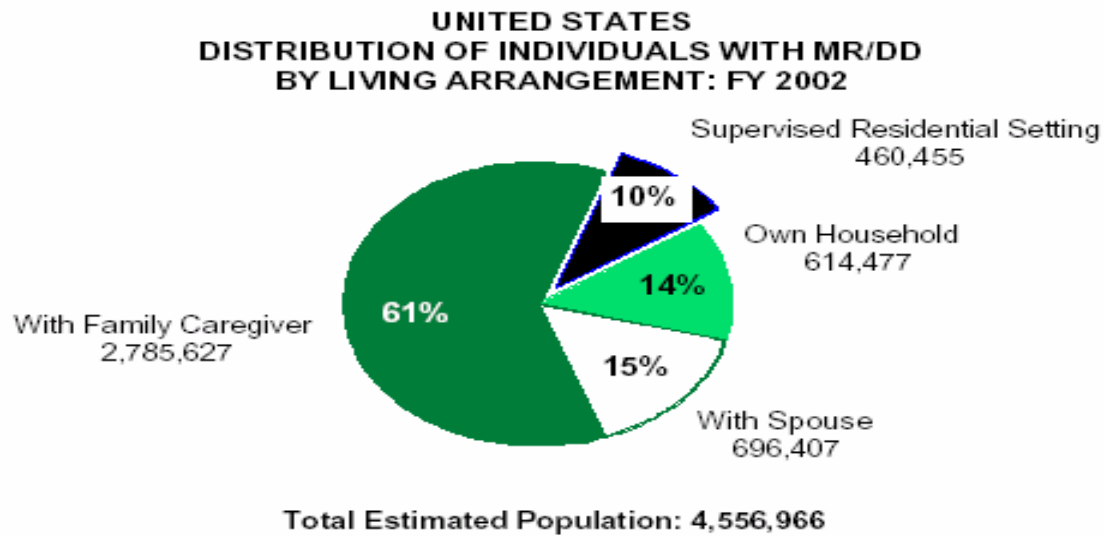
- Case Management
- Personal Care
- Pre Vocational Training
- Day Habilitation
- Supported Employment
- Residential
- In-house Support
- Home-environmental modifications
- Specialized medical equipment and supplies
- Personal Emergency Response (PERS)
- Specialized Consultation Therapy including Behavioral Management Approaches

- Transportation
- Homemaker Services

Two states offered Respite, and Family Support or Caregiver Training while only one offered self-determination, Assistive Technology, and Supported Living. The array of services in NC covers the majority of these services with the exception of those elements that support the family and that allow consumers to live more independently such as Self Determination, and In House Support for people living independently.

The aging factor directly influences demand for services, particularly for people with developmental disabilities. This occurs because the majority of people with developmental disabilities in the United States currently reside with family caregivers. As these caregivers age beyond their care giving capacities, formal living arrangements must be established to support their relatives with disabilities. This also has the effect of increasing hospital and residential admissions unnecessarily and maintaining resources in restrictive care that could be shifted to community based services. In 1995, an estimated 2.29 million individuals 55 years or older cared for a family member with significant functional limitations or intellectual or developmental disabilities with whom they shared a household. The aging of our society in general directly influences demand for developmental disabilities services. This occurs because the majority of people with developmental disabilities in the United States currently reside with family caregivers. As these caregivers age beyond their care giving capacities, formal living arrangements must be established to support their relatives with disabilities. It is estimated that, in 1991, 61% of persons with developmental disabilities resided with family caregivers, and 39% lived on their own or within the formal out-of-home residential care system. In 2002, 2.79 million of the 4.56 million persons with developmental disabilities in the U.S. population were receiving residential care from family caregivers, about six times the number of persons served by the formal out-of-home residential care system. Twenty-five % of individuals with developmental disabilities lived with family caregivers over 60 years old, and an additional 35% were in households of middle-aged caretakers for whom transition issues were imminent. There are 18,827 persons with developmental disabilities in North Carolina living with aged caregivers. Exhibits 1 and 2 show the living arrangement of persons with DD in 2002 and the age of caregivers. While we have no way of projecting the amount of funds necessary to provide these caregiver supports, this factor alone will be a major cost in the next 10-15 years.

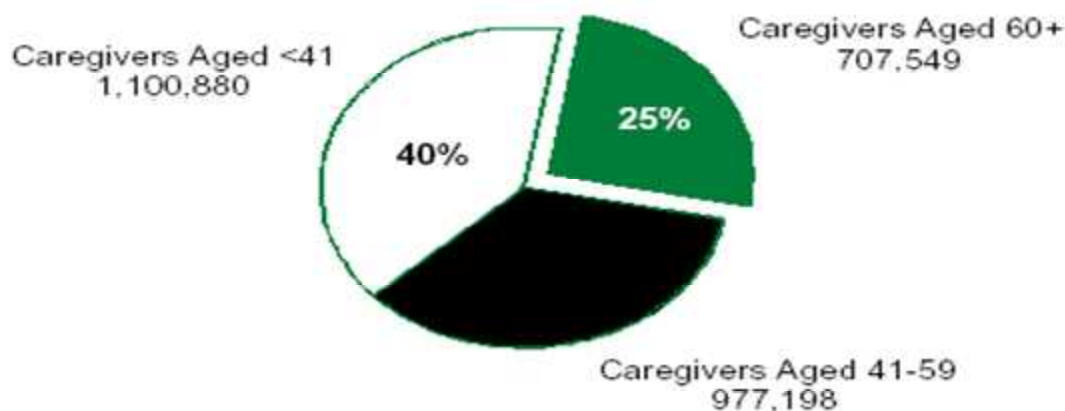
Exhibit 1



A second factor impinging on the growing demand for MR/DD services is the increase in the lifespan of individuals with developmental disabilities. The mean age at death for persons with mental retardation was 66 years in 1993—up from 19 years in the 1930s and 59 years in the 1970s. With continued improvement in their health status, individuals with mental retardation, particularly those without severe impairments, are expected to have a lifespan equal to that of the general population. Longevity has also increased dramatically for persons with Down's syndrome. Average age at death for persons with Down's syndrome in the 1920s was 9 years; it rose to 31 years in the 1960s and to 56 years in 1993. As persons with developmental disabilities live longer, they require services and support for longer periods of time. This directly impacts service delivery systems. The increased life expectancy of persons with developmental disabilities since 1970 accounts for a significant percentage of the increased demand for residential services today. The likelihood of older persons with developmental disabilities living into their own retirement and outliving their family caregivers has increased substantially in recent years. This has stimulated a growing demand for additional services and supports.²

² Information used in this section, including the tables, was taken from a report entitled The State of the States in Developmental Disabilities written by: Mary C. Rizzolo, Richard Hemp, David Braddock, Amy Pomeranz-Essley (2004) of the Department of Psychiatry and Coleman Institute for Cognitive Disabilities The University of Colorado

Exhibit 2
UNITED STATES
DISTRIBUTION OF INDIVIDUALS WITH MR/DD
LIVING WITH FAMILY CAREGIVERS: FY 2002



Total Estimated Population: 2,785,627

The State of the States in Developmental Disabilities report, The New Freedom Initiative, and The National Association of State Directors of Developmental Disabilities Services (NASDDDS) 2006 Strategic Plan all reflect similar principles and goals to implement EBP. The federal New Freedom Initiative is composed of the following key components that reflect some best practice service strategies and gaps in service:

- Access to assistive and universally designed technologies;
- Expanding educational opportunities for Americans with disabilities;
- Integrating individuals with disabilities into the workforce, including implementation of "Ticket to Work" that allows individuals with disabilities to choose their own support services and maintain health benefits when working,
- Full enforcement of the Americans with Disabilities Act and innovative transportation planning;
- Promoting full access to community life: home ownership through use of Section 8 housing vouchers for down payment on a house;
- Supporting the most integrated community-based settings for individuals with disabilities in accordance with the Olmstead Supreme Court decision; and
- Increasing the accessibility of organizations that are currently exempt from Title III of the ADA (such as churches and civic organizations).

The NASDDDS identified strategic policy goals and implementation strategies to address public system challenges and believes public services are significantly influenced by a number of emerging factors that are likely to hamper the ability of states to meet the needs of the growing numbers of people requesting support.

- A Heightened Emphasis on Quality Oversight and Improvement.
- The Growth in Self-directed Services.
- Expanding Cost-Effective Community Support Options
- Restricted Rates of Growth in Medicaid Spending.

- The Need to Strengthen Performance Measurement.
- Expanding Needs of Special Populations.
- Requirements for Improved System-Wide Financial Management.
- The Need to Stabilize and Improve the Direct Support Workforce.

NASDDS emphasizes the need to build the community infrastructure needed to undergird a system of individualized supports. Some of the critical challenges are:

- Fostering the expanded use of assistive and applied technologies
- The need to emphasize the use of “evidence-based” intervention strategies of proven effectiveness.
- Improving access to integrated community housing options/alternatives.
- Strengthening community infrastructures to support individuals (and their families) who are self directing their services and supports.
- Improving the quality and responsiveness of case management services.
- The need for increased emphasis on achieving employment outcomes and making well-paid jobs a reality for people with developmental disabilities.
- Building community capacity to support people with multiple and complex needs.
- Developing an Effective Workforce
- Improving supports to families of people with developmental disabilities.

Service Strategies – Best Practices DD

Similar service strategies were defined in the Report: The State of the States in Developmental Disabilities including Supported Employment, Family Support, and Personal Assistance.

Family Support Services- Family support is any community based service that provides for vouchers, direct cash payments to families, reimbursement, or direct payments to service providers. Examples of family support programs include cash subsidy payments, respite care, family counseling, architectural adaptation of the home, in-home training, sibling support programs, education and behavior management services and the purchase of specialized equipment. Family support emerged as a significant priority for MR/DD state agencies in the early 1980s.

Supported Employment - In the early 1980s, state MR/DD agencies began providing long-term support for workers with developmental disabilities. These services supplemented the employment options that were available through states’ vocational rehabilitation (VR) agencies. Research since that time, along with advances in employment services and legislative mandates such as the Americans with Disabilities Act of 1990; have reinforced the need for supported employment even though most states have maintained commitments to sheltered work settings for people who have been in the system for an extended period of time. Longitudinal studies of people moving from sheltered to supported employment have shown benefits for both consumers and taxpayers. Research by the National Center on Workforce and Disability/Adult (NCWD) 2002 shows that of the approximately 70% of persons with disabilities who are unemployed, two out of three wish to work.

The Division of MH/DD/SA convened a workgroup to make recommendations for a transition plan to increase the availability of individualized options to Adult Day Vocational Programs. The goal was to provide consumers with employment, vocational, or other meaningful activities based on their needs and preferences. These recommendations were intended to decrease reliance on segregated program models. The Workgroup felt strongly that no individual should experience service interruption. The group identified four categories of individuals whose circumstances need to be considered separately.

- Seniors and retirees with disabilities,
- Students transitioning to work or adult life,
- Persons who are appropriate for supported employment services, and
- Persons with multiple complex needs who can continue to benefit from a supervised day-program setting or persons who have been socialized or institutionalized into segregated service delivery settings.

The group also noted other key factors important in moving forward:

- The impact of residential program funding issues on day programming
- The organizations providing these services must undergo and embrace significant cultural change.
- Technical assistance and support must be made available to these organizations on an on-going basis.
- In addition, transportation must be funded.

Supported living - First initiated in Colorado, Florida, Missouri, North Dakota, Ohio, Oregon, and Wisconsin in the 80's. The increased funding to emphasize individual choice, control over housing, and individualized, person centered planning reflected in part the growing strength of self-advocacy organizations. Self-advocates articulated where they wished to live and the types of support they preferred. Supported living includes housing in which individuals choose where and with whom they live, in which ownership is by someone other than the supports provider (i.e., by the individual, the family, a landlord, or a housing cooperative), and in which the individual has a personalized support plan that changes as her or his needs and abilities change. According to this definition, 47 states reported providing supported living services to 95,223 individuals in 2002. NC was not reporting housing outcomes at the time of this report.

Personal assistance services are supports provided to people living in their own homes. In 2002, initiatives in personal assistance were identified in 22 states. From 2000 to 2002, inflation adjusted growth in personal assistance funding advanced 90%. Alaska, Maine, New Mexico, and Oklahoma spent \$40.00 or more per capita of the state general population for supported living and personal assistance; the U.S. average was \$8.14 per capita. Supported living spending per participant varied greatly across the states from \$2,196 in Mississippi to \$124,544 in Oklahoma; the national average was \$20,643. Personal assistance cost per participant in the 21 states reporting spending data ranged from West Virginia's \$844 to Oklahoma's \$89,354; the national average

was \$14,146. These cost extremes highlight state service systems that vary from those financing comprehensive supported living and personal assistance services as an integral part of deinstitutionalization plans to more limited support intended for individuals with fewer needs. Planned efforts to reach families and caregivers, the community, schools and service agencies are necessary to lay the foundation for:

- Increased penetration
- Building natural supports, and
- Reducing stigma.

In summary, the EBP approach and the Gaps Analysis must consider the following:

- Aging Population
 - Create opportunities for social supports and person centered life planning that assures support and residential stability for individuals with aging caregivers/families.
 - Increase housing capacity.
 - Work with family physicians and case managers to increase coordination regarding health care issues.
- Development of community capacity through partnerships
 - Establish agreements with key partner agencies including the schools, DSS and the department of Vocational Rehabilitation.
 - Integrate the IEPC and the PCP
 - Utilize DSS funded supports for independent living
 - Involve Vocational Rehabilitation in efforts to implement supported employment.
- Staff Issues
 - Provide training to families and consumers in PCP so they can hold providers accountable while simultaneously initiating culture change in provider approaches to consumers and families.
 - Insure that those people directly working with consumers are given incentives to perform at the highest level, including competitive salaries.
 - Incorporate principles and values that must be demonstrated in job evaluations.
 - Provide additional supervision and support to direct care workers.
 - Encourage staff to understand person centeredness so healthier and more supportive relationships can be developed.
- Best practice service strategies and outcomes
 - Expand individual and family support, supported employment, supported living opportunities and address the needs of those with multiple and complex conditions...
 - Redirect resources to best practice parts of the budget, especially for new persons entering the system.
 - Require programs to practice from selected evidence based models.
- Measure real life outcomes.
 - Gradually reduce site-based programs.
 - Advocate for Ticket to Work and ADA Compliance.
 - Develop safe and affordable housing.

- Examine healthcare integration options.
- Person centered planning
- Increase the emphasis on the incorporation of consumer desired outcomes in PCPs versus goals singularly related to staff perceived “needs”.
- Spend time up front training the consumers and families so that they know how this should work.
- Monitor records through UR to determine if key elements of PCP have been carried out.
- Create a volunteer group of PCP facilitators/advocates.
- Management of resources
 - Equitably apply resources and reduce layering of services while requiring the increased use of natural and community supports.
 - Train case managers and workers in creative methods to integrate people in the community.
 - Entertain fund specific community projects in conjunction with key community civic organizations.

Traumatic Brain Injury

In addition, persons with traumatic brain injury are part of this disability grouping in the State of NC. Traumatic brain injury contributes to a substantial number of deaths and cases of permanent disability annually. The CDC estimates that at least 5.3 million Americans, about 2% of the U.S. population, currently have a long-term or lifelong need for help to perform activities of daily living as a result of a TBI. Approximately 43,000 NC residents currently live with the effects of TBI based on population data for the year 2000, assuming that the number of people with mild to severe brain injuries in North Carolina is similar to the national profile.³

Adults with Severe Mental Illness

The National Alliance for the Mentally Ill has adopted the following Standards of Care as their ideal system of support:

- Access to Appropriate Medication,
- Inpatient Care,
- ACT Programs,
- General Medical Care,
- Integrated Services for Dual Diagnosis,
- Family Psycho education and Support,
- Peer Provided Services and Supports,
- Supported Employment Services,
- Affordable Housing and Supports,
- Jail Diversion Programs.

³Centers for Disease Control and Prevention, National Center for Injury and Prevention Control; TBI Overview, 2007 Thurman D, Alverson C, Dunn K, Guerrero J, Sniezek J. Traumatic brain injury in the United States: a public health perspective. Journal of Head Trauma Rehabilitation 1999;14(6):602–15.

Services and technology within behavioral health services for adults has significantly improved over the past few years. More research has been done and more is known about what works for adults with serious mental illness than for many other populations. For general mental health issues (i.e., depression, anxiety, post-traumatic stress, etc.) some combination of new medications and brief cognitive therapies or supportive therapeutic groups has proven to be almost universally effective if delivered appropriately and with sensitivity to culture and individual needs. Adults with serious mental illness (i.e., schizophrenia, bipolar disorder, major depression) are likely to constitute the vast majority of the publicly funded service delivery system's consumers. Newer technologies include: atypical anti-psychotics, anti-depressants, and anti-anxiety medications, and community treatment approaches such as assertive community treatment (ACT); family psycho educational services; illness self-management or peer supports; recovery-oriented psychosocial rehabilitation services, including supported employment, education and housing; and integrated treatment for adults with co-occurring disorders. These six services are considered evidence-based and therefore, any good system of care should have all these services available at a minimum. Additionally, the use of specific types of therapy tailored for specific disorders is important (e.g., short term cognitive therapy for individuals with depression; dialectical behavioral therapy for individuals with anxiety disorders).

In recent decades, the federal community support program (CSP) has been the widely accepted, preferred model of community-based services for adults with serious and persistent mental illness. States that have fully implemented the CSP model tend to be the furthest along in terms of truly integrating recovery and empowerment values and principles into the local public behavioral health delivery systems. A good public mental health system is comprised of a number of interlocking and interdependent elements. These start with basic treatment philosophy and values, and extend to specific face-to-face clinical and community support services. The integration and continuity of these components are important to consumers and families as is the presence of each discrete element.

EBP Services

In summary, the EBP approach and the Gaps Analysis must consider the following for a NC preferred system:

- Recovery values and principles
- Consumer self-determination and choice
- Psychosocial rehabilitation approaches – “Recovery is what people with disabilities do....rehabilitation [is] what helpers do to facilitate recovery.”
Psychosocial rehabilitation, also known as psychiatric rehabilitation, includes a set of services and supports designed to assist individuals regain maximum independent functioning in living environments and communities of their choice.
- Peer supports/consumer-operated services – Consumer-operated peer support and self-help activities can take a number of forms. Many consumers form clubhouses or drop-in centers and/or operate warm lines, peer outreach, and related services. Consumers as peer supports have also been successfully

integrated into crisis outreach teams and assertive community treatment teams. Consumers have become engaged in training, satisfaction and quality reviews, ombudsmen services, and a variety of related self-advocacy activities.

- Prevention/early intervention and diversion services –Early intervention is better for consumers and their families because it reduces the long-term negative effects of the illness and initiates the recovery process at a time when the disabling effects of the illness are minimal and personal and family resources are not yet exhausted.
- Crisis services – Crisis delivery systems are best developed and operated to address the immediate assessment, intervention, and service authorization processes for both mental health and substance abuse, for both children/adolescents and adults.
- Mobile outreach/ACT/Community Support teams – Assertive Community Treatment (ACT) is the model most commonly used to provide intensive mobile services to consumers who are: (a) at very high risk of hospitalization or otherwise losing community housing and supports; and (b) who are unwilling or unable to participate in or benefit from traditional clinic or facility-based services. ACT is “a self contained clinical team” that provides multiple methods of support to individuals including housing, employment, and physician care.
- Medical and clinical treatment/medication management – There are a number of fundamental principles or standards for high quality and effective clinical treatment services in the public behavioral health arena. Algorithms that have promoted medication best practices should be implemented across the State.
- Services for families – It is now well established that families of adults with severe mental illness have needs for education and support in order to assist their family member and in order to manage the effects of the family member’s illness on the rest of the family. It is also established by research that psycho-educational classes for families produce better outcomes for families and the individual with mental illness. Consumers and families should receive these services at admission as an introduction to treatment.
- Services for persons with co-occurring mental illness and substance abuse disorders. Co-occurring disorders are major contributing factors in loss of housing, treatment non-compliance, emergency room use, and re-hospitalization. When mental illness and substance abuse diagnoses co-occur, they both must be treated concurrently with the primary diagnosis, not as one or the other. The systems of assessment, care, and competencies must be fully embedded in the entire system of care for individuals with serious mental illness. The technology and competencies necessary to serve individuals with co-occurring disorders have been proven for a considerable period of time over many empirical studies.
- Geriatric services – There should be integration and coordination among resources important to elders, particularly primary health care, mental health and substance abuse treatment, and elder services such as homemakers, meals-on-wheels, and visiting nurse services.
- Housing – People with serious mental illnesses have difficulty locating and maintaining safe, affordable housing for a number of reasons. In addition to the debilitating symptoms of the illness itself, they often lack adequate income and

social supports, and many have co-occurring disorders, including alcohol or other drug problems and acute or chronic physical health problems. They often face the stigma associated with their illnesses and the fears of potential landlords or neighbors. Progressive systems of care should attempt to provide independent living alternatives. This requires a set of core service capacities that sharply contrast with traditional mental health services and service delivery. Thus, a movement to develop supportive housing often involves a significant reorganization of existing services. Some key components of the service array should include home-based services, natural community supports, housing-related activities (e.g., owner outreach and housing search), and developing a flexible and readily available safety net, such as respite and mobile crisis services, assistance with access to financial subsidies for housing costs, daily living expenses and health care.

- Employment – The technology of successful supported employment programs is well documented. It includes:
 - Assuring consideration of individual's interests, abilities, and goals in selecting jobs;
 - Early intervention efforts designed to assist people to return to work as soon as possible after the onset of a psychiatric disability;
 - Strategies that focus on getting people into the workplace and then training on the job, rather than spending time in pre-employment training
 - Strategies that match individuals' education and skill levels with employment opportunities. People with mental illness do not have to work only in minimum wage, service sector jobs;
 - Provision of a range of on-going services and supports to assist people to work and interact effectively in the workplace;
 - Flexibility in work expectations during periods of acute exacerbation of the mental illness;
 - Provision of a range of work experiences including short term job tryouts, on the job training, and part time jobs;
 - Provision of a range of other satisfying and productive activities, including education and volunteer activities;
 - Assuring that all components of the public behavioral health system provide sufficient employment opportunities for current and former consumers; and
 - Establishment of multi-disciplinary teams to blend vocational supports with other clinical and community supports.

These attributes of successful supported employment programs do not have to be contained in separate and discrete employment service program components. A variety of approaches have been used, including the ACT team model, expanded clubhouse programs, and consumer operated models. In fact, recent experience has shown that all program elements should be focused on supporting individuals in moving towards their choice of productive activity, and then providing sufficient supports to maintain the productive activity.

Service Continuity – Continuity must be increased for people to achieve positive outcomes.

Children with Serious Emotional Disturbance

At the federal level, the Child and Adolescent Service System Program (CASSP) philosophy has long been recognized as defining best practice and preferred systems of care for children and their families, especially those with severe emotional disorders (SED). The CASSP principles clearly state that services for children and families should be child-centered, family-focused, community based, multi-system, culturally competent, and least restrictive. The most recent data from SAMHSA's systems of care demonstrations show great promise in reducing behavioral problems and out-of-school days and increasing school performance for children/adolescents.

The Surgeon General recently released a report entitled Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda. This report describes the needs in children's mental health services and research and calls on states and local systems to implement more effective services for children and youth based on the principles outlined above. A number of specialized programs have been developed during the last decade to target high-risk children and families. These include the Family Preservation Program, based on the Homebuilder Model pioneered in Tacoma, Washington, which addresses children at imminent risk of out-of-home placement. Intensive Case Management, tried in several states (New York, Ohio, Oklahoma, Texas), has been used to work with children and families who have not responded to traditional approaches of service delivery. In recent years, the advent of the evidence-based practice called multi-systemic therapy (MST) developed and evaluated by practitioners and researchers in South Carolina, has gained national recognition as the most effective intervention for children and adolescents with conduct disorders and other behavioral aspects to their diagnoses. In some places, a similar but not as well researched intensive team-based approach for children/adolescents and their families is called intensive family interventions (IFI) or in NC Intensive In-Home Services.

Residential Care

In NC, Medicaid funds pay for residential placements for children/adolescents without a requirement that programs such as Intensive In-home Services or Community Support serve them once back in the home. Emerging research has demonstrated that residential treatment (that is, treatment in a group residential setting outside the home) and group homes for children/adolescents have consistently been shown to be ineffective in creating long-term gains for children/adolescents with behavioral health needs. In fact, in some cases, this type of residential setting has been shown to be detrimental to outcomes for males with high-risk problem behaviors.

System of Care

NC has promoted System of Care approaches for children and families and they have been highly successful in some areas. System of care requires the following:

- A planned and thoughtful willingness on the part of all parties to cede control and share resources in meaningful ways;
- Single-site management of all resources, with the authority to access all applicable service modalities and to commit funds for these services;
- Integration of and adherence to CASSP principles throughout the system of care;
- A unified comprehensive, strengths-based assessment and treatment plan governing all aspects of service access and delivery;
- Leadership committed to managing and delivering services in new, creative, and flexible ways;
- A commitment to include families and their children in all levels of service planning, implementation, management, and evaluation as well as in treatment planning and provider choice; and
- A promise not to let children and their families go – the system will be there for them whenever and wherever they want, with whatever they need and choose.

EBP

The Child Mental Health Plan for NC specifies clearly the EBP and general direction for implementation. As stated earlier, the State has implemented these EBP through CMS approved service definitions. In summary, the EBP approach and the Gaps Analysis must consider the following for a NC preferred system:

- Crisis services
- Treatment of Dually Diagnosed Adolescents
- Service Continuity
- Intensive In-Home Programs
- Multi systemic Therapy
- Multi Dimensional Family Therapy

Adults and Children with Substance Abuse Disorders

The consequences of drug and alcohol abuse in the United States are enormously costly. Although the costs can be evaluated in dollars, they are more apparent in family disruption, neglect of children, personal psychological, relationship and financial losses, medical problems, fetal alcohol syndrome, HIV infection, legal problems, incarceration, automobile accidents, lower work productivity, and job loss. Treating SA has proven to be difficult.

The Treatment Improvement Protocols (TIPs) are best practice guidelines for the treatment of substance abuse. The Center for Substance Abuse Treatment (CSAT) Office of Evaluation, Scientific Analysis, and Synthesis draws on the experience and knowledge of clinical, research, and administrative experts to produce the TIPs, which are distributed across the country. Among them are the following key TIPs: Detoxification and Substance Abuse Treatment emphasizes that by itself, detoxification does not constitute complete substance abuse treatment, and it identifies the necessity for linking patients in detoxification with substance abuse treatment services.

Substance Abuse Treatment for Adults in the Criminal Justice System

TIP 44 was developed to provide recommendations and best practice guidelines to counselors and administrators based on the research literature and the experience of seasoned treatment professionals. It covers the full range of criminal justice settings and all the phases through which an individual progresses in the criminal justice system. It addresses both clinical and programmatic areas of treatment.

Pregnant, Substance-Using Women

These guidelines are intended to stimulate a wide variety of service providers to participate in crafting a full continuum of family-oriented services for pregnant, substance-using women and their children. The guidance offered by these protocols is the result of research knowledge and the clinical experience of expert panel members. Medication-Assisted Treatment for Opioid Addiction in Opioid Treatment Programs The TIP emphasizes the importance of supportive services such as counseling, mental health and other medical services, and vocational rehabilitation in facilitating recovery for patients receiving medication-assisted treatment.

Substance Abuse Treatment for Persons with Co-Occurring Disorders provides information about new developments in the rapidly growing field of co-occurring substance use and mental disorders and captures the state of the art in the treatment of people with co-occurring disorders.

Group Models

Substance Abuse Treatment: Group Therapy describes five group models that are common in substance abuse treatment:

- Psycho educational groups-educate clients about substance abuse
- Skills development groups-cultivate the skills needed to attain and sustain abstinence
- Cognitive-behavioral groups-alter thoughts and actions that lead to substance abuse
- Support groups-buoy members and provide a forum to share pragmatic information about maintaining abstinence and managing day-to-day, chemical-free living
- Interpersonal process groups-delve into major developmental issues that contribute to addiction and can interfere with recovery

Employment

Integrating Substance Abuse Treatment and Vocational Services Employment has been positively correlated with retention in treatment. By holding a job, a client establishes a legal source of income, structured use of time, and improved self-esteem, which in turn may reduce substance use and criminal activity. Years of research show that the best predictors of successful substance abuse treatment are

- Gainful employment
- Adequate family support
- Lack of coexisting mental illness

Brief Interventions and Brief Therapies for Substance Abuse Treatment

An increasing body of literature confirms the effectiveness of brief approaches in substance abuse treatment as outlined below. This TIP looks at the increasing body of literature that confirms the effectiveness of brief approaches in substance abuse treatment.

Comprehensive Case Management for Substance Abuse Treatment

Research and clinical experience indicate that people with substance abuse disorders have better treatment outcomes if their other problems are addressed concurrently.

Three decades of scientific research and clinical practice have yielded a variety of effective approaches to drug addiction treatment. Extensive data document that drug addiction treatment is as effective as are treatments for most other similarly chronic medical conditions. Addiction is a chronic disorder; the ultimate goal of long-term abstinence often requires sustained and repeated treatment episodes.

Principles of Drug Treatment

Of course, not all drug abuse treatment is equally effective. Research also has revealed a set of overarching principles that characterize the most effective drug abuse and addiction treatments and their implementation. To share the results of this extensive body of research and foster more widespread use of scientifically based treatment components, the National Institute on Drug Abuse (NIDA) prepared Principles of Drug Addiction Treatment: A Research Based Guide. It summarizes basic overarching principles that characterize effective treatment, elaborates on these principles by providing answers to frequently raised questions, as supported by the available scientific literature, and describes the types of treatment. The following are the overarching principles from the guide:

- No single treatment is appropriate for all individuals. Matching treatment settings, interventions, and services to each individual's particular problems and needs is critical to his or her ultimate success in returning to productive functioning in the family, workplace, and society.
- Treatment needs to be readily available. Because individuals who are addicted to drugs may be uncertain about entering treatment, taking advantage of opportunities when they are ready for treatment is crucial. Potential treatment applicants can be lost if treatment is not immediately available or is not readily accessible.
- Effective treatment attends to multiple needs of the individual, not just his or her drug use. To be effective, treatment must address the individual's drug use and any associated medical, psychological, social, vocational, and legal problems.
- An individual's treatment and services plan must be assessed continually and modified as necessary to ensure that the plan meets the person's changing needs. A consumer may require varying combinations of services and treatment components during the course of treatment and recovery. In addition to counseling or psychotherapy, a consumer at times may require medication, other medical services family therapy, parenting instruction, vocational rehabilitation,

and social and legal services. It is critical that the treatment approach be appropriate to the individual's age, gender ethnicity, and culture.

- Remaining in treatment for an adequate period of time is critical for treatment effectiveness. The appropriate duration for an individual depends on his or her problems and needs. Research indicates that for most consumers, the threshold of significant improvement is reached at about 3 months in treatment. After this threshold is reached, additional treatment can produce further progress toward recovery. Because people often leave treatment prematurely, programs should include strategies to engage and keep consumers in treatment.
- Counseling (individual and/or group) and other behavioral therapies are critical components of effective treatment for addiction. In therapy, consumers address issues of motivation, build skills to resist drug use, replace drug-using activities with constructive and rewarding non drug-using activities, and improve problem-solving abilities. Behavioral therapy also facilitates interpersonal relationships and the individual's ability to function in the family and community.
- Medications are an important element of treatment for many consumers, especially when combined with counseling and other behavioral therapies. Methadone and levo-alpha-acetylmethadol (LAAM) are very effective in helping individuals addicted to heroin or other opiates stabilize their lives and reduce their illicit drug use. Naltrexone is also an effective medication for some opiate addicts and some consumers with co-occurring alcohol dependence. For persons addicted to nicotine, a nicotine replacement product (such as patches or gum) or an oral medication (such as bupropion) can be an effective component of treatment. For consumers with mental disorders, both behavioral treatments and medications can be critically important.
- Addicted or drug-abusing individuals with coexisting mental disorders should have both disorders treated in an integrated way. Because addictive disorders and mental disorders often occur in the same individual, consumers presenting for either condition should be assessed and treated for the co-occurrence of the other type of disorder.
- Medical detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug use. Medical detoxification safely manages the acute physical symptoms of withdrawal associated with stopping drug use. While detoxification alone is rarely sufficient to help addicts achieve long-term abstinence, for some individuals it is a strongly indicated precursor to effective drug addiction treatment.
- Treatment does not need to be voluntary to be effective. Strong motivation can facilitate the treatment process. Sanctions or enticements in the family, employment setting, or criminal justice system can increase significantly both treatment entry and retention rates and the success of drug treatment interventions.
- Possible drug use during treatment must be monitored continuously. Lapses to drug use can occur during treatment. The objective monitoring of a consumer's drug and alcohol use during treatment, such as through urinalysis or other tests, can help the consumer withstand urges to use drugs. Such monitoring also can provide early evidence of drug use so that the individual's treatment plan can be

adjusted. Feedback to consumers who test positive for illicit drug use is an important element of monitoring.

- Treatment programs should provide assessment for HIV/Aids, hepatitis B and c, tuberculosis and other infectious diseases, and counseling to help consumers modify or change behaviors that place themselves or others at risk of infection. Counseling can help consumers avoid high-risk behavior. Counseling also can help people who are already infected manage their illness.
- Recovery from drug addiction can be a long-term process and frequently requires multiple episodes of treatment. As with other chronic illnesses, relapses to drug use can occur during or after successful treatment episodes. Addicted individuals may require prolonged treatment and multiple episodes of treatment to achieve long-term abstinence and fully restored functioning. Participation in self-help support programs during and following treatment often is helpful in maintaining abstinence.

Two examples of how NC is integrating these principles in their service delivery are Treatment Accountability for Safer Communities (TASC) and the CASAWORKS for Families Residential initiative. TASC serves as the bridge between justice and need to restore offenders to health and self-sufficiency. TASC operates in accordance with the DHHS-DOC-AOC Memorandum of Agreement and provides Screening and Clinical Assessment, Service Determination and Placement, Care Planning, Coordination and Management, and Reporting for the MHDDSA System for the Substance Abusing Criminal Justice Offender target population. NIDA has also developed a Principles of Drug Abuse Treatment guide for criminal justice populations.

The CASAWORKS for Families model was developed by the Center for the Study of Addiction and Substance Abuse (CASA) at Columbia University in response to the impact of welfare reform on substance abusing families. Many of the women referred to CASAWORKS are in jeopardy of losing their Work First benefits and or custody of the children as a result of their substance use. The model proposes that the best way to help substance abusing TANF families become economically self-sufficient is to provide an integrated and concurrent gender specific substance abuse treatment and job readiness/ training/ employment program. This program model also addresses mental health concerns, such as depression, anxiety and trauma: parenting skills: and barriers to treatment, in particular childcare and transportation.

During the past 15 years, the National Institute on Drug Abuse (NIDA) has sponsored a comprehensive research program in response to the dynamic nature of the co-occurring epidemics of drug abuse and HIV/AIDS. This research has yielded a set of scientifically based principles that should prove useful to community planners, policymakers, service providers, and medical practitioners as they develop and implement programs to prevent the spread of HIV and other infections among injecting and non-injecting drug users and their sexual partners. To foster widespread use of these principles, NIDA provide the research-based guide: Principles of HIV/AIDS Prevention in Drug-Using Populations.

The American Society of Addiction Medicine Patient Placement

Criteria for the Treatment of Substance-Related Disorders, Second Edition -Revised (ASAM PPC-2R) define substance abuse programs equipped to address co-occurring substance abuse and mental health disorders at two levels: Dual Diagnosis Capable and Dual Diagnosis Enhance Program. According to the ASAM PPC-2R, Dual Diagnosis Capable Programs typically meet the needs of consumers whose psychiatric disorders are stable and who are capable of independent functioning and are capable of participating in addiction treatment, and Dual Diagnosis Enhanced Programs are appropriate for consumers who need primary addiction but are more symptomatic and/or functionally impaired as a result of their co-occurring mental disorder. As a result, the ASAM PPC-2R recommends these essential elements for treatment programs who accept consumers with co-occurring mental and substance-related disorders:

- A psychiatrist available on site in acute settings and through coordination in all other settings
- Medication management is integrated into the treatment plan
- Counselors are trained to monitor and promote compliance with pharmacotherapies
- In programs that work with persons who are severely mental ill, intensive case management and assertive community treatment service are available

Additionally, the ASAM PPC-2R recommends specific policies and procedures to enhance the linkage of services required by consumers with co-occurring mental and substance related disorders i.e. MOUs with other providers, sufficient case management, etc.

EBP

In summary, the EBP approach and the Gaps Analysis must consider the following for a NC preferred system:

- Prevention/early intervention and diversion services
- Crisis services
- Services for persons with co-occurring mental illness and substance abuse disorders
- Housing
- Employment
- Community Detoxification
- Comprehensive Outpatient using EBP
- Residential services
- Vocational Training
- Disease self management
- Service Continuity

Children/Adolescents with Substance Abuse or Dependence - Services for adolescents should be directed toward the following goals:

- Availability of and access to an array of services without having to place the adolescent in state custody to attain them.

- Services individualized to the needs of the adolescent including attention to developmental processes and co-occurring mental health issues.
- Active and informed participation by the youth and family in treatment planning.
- Availability of supports for families/caregivers to bolster family relationships and to maintain the adolescent in the community.
- Availability of a single comprehensive assessment that is used to inform service planning and delivery, across systems.
- A long-term view that guides service delivery and works toward goals of successful community functioning both in adolescence and adulthood.
- Continuity of care and, when necessary, successful transitions to other service providers and other levels of care.
- Service planning and coordination that take place among all providers and agencies delivering services that have responsibility for the care of the adolescent.

Research shows that few people initiate drug use/abuse after the age of 25. Thus, it is imperative that early intervention and moreover, prevention interventions be provided. Research has shown that prevention programs that are based on the following principles are the most successful:

- Early Intervention - the earlier prevention is started in a person's life, the more likely it will succeed;
- Evidence-based - prevention programs should be knowledge-based, incorporating state-of-the-art findings and practices drawn from scientific research and expertise;
- Comprehensive - prevention programs should be comprehensive, e.g., include components of education, health care, social service, religion, and law enforcement, as well as family involvement and should focus on at least one of the six prevention domains [individual, family, peer, school, community, and society] identified by the Center for Substance Abuse Prevention (CSAP);
- Evaluated for both process and outcomes - programs should include process as well as outcome evaluations to ensure that knowledge derived from prevention programs is validated and disseminated to communities;
- Reduce risk factors and increase resiliency - prevention strategies must be structured to reduce individual and environmental risk factors and to increase resiliency factors in high risk populations;
- Mixed in with general health care systems - prevention programs should be intertwined with the general health care and social services delivery systems and must provide for a full continuum of services;
- Promote life skills - prevention programs should build social competencies and life skills, such as decision-making, problem-solving, communication and resistance skills, critical analysis (for example, of media messages), stress management and systematic and judgmental abilities;
- Information dissemination – programs should provide accurate information on the nature and extent of alcohol, tobacco, and other drug use, abuse, and addiction and their effects on individuals, families, and communities, as well as information

to increase perceptions of risk. Additionally, they should provide knowledge and awareness of prevention policies, programs, and services;

- Targeted approach - prevention programs that are tailored to differing population groups are most effective;
- Alternative activities – programs should provide constructive, fun and healthy activities to offset the attraction to, or otherwise meet the needs usually filled by, alcohol, tobacco, and other drug use;
- Problem identification and referral - screening for already existing tendencies toward substance abuse and referrals for preventive treatment for curbing such tendencies;
- Community initiated - successful programs are initiated and conducted by communities themselves;
- Environmental approach - changes to written and unwritten community standards, codes, and attitudes; for example, laws to restrict availability and access, price increases for alcohol and tobacco and community-wide actions.

Treatment of Dually Diagnosed Adolescents

The Individual Therapeutic Alliance within a Day Treatment Model - A day treatment model for adolescent drug abusers with a co morbid psychiatric disorder, with the understanding that most of the adolescents treated within the CCATS Model have underlying deficits that have roots in the common experience of trauma, including pervasive sexual and physical abuse, loss, and inadequate parenting, in addition to the complicating factors of learning difficulties, parental alcoholism and drug abuse, and longstanding behavioral and emotional difficulties. These combined predisposing or pre morbid psychological vulnerabilities can be characterized as consisting of various clusters of character deficits, deficits in self-structure, and patterns of maladaptive coping that have been longstanding and in fact may have been learned from earliest childhood as attempts by the child to adapt to a chaotic and unsafe emotional environment.

While substance abuse treatment services for children and adolescents are extremely limited in many communities, North Carolina has successfully initiated two model treatment initiatives. A network of regional substance abuse programs offering intensive services for youth and families in designated sites has been implemented in coordination with the Department of Public Instruction. The Managing Access to Juvenile Offender Resources and Services (MAJORS) adolescent substance abuse/juvenile justice initiative provides a coordinated outpatient treatment/case management program in designated counties in conjunction with the Department of Juvenile Justice and Delinquency Prevention. Both of these initiatives need to be expanded to provide equitable access to these services for adolescents statewide.

EBP

In summary, the EBP approach and the Gaps Analysis must consider the following for a NC preferred system:

- Early Intervention prevention programs

- Promotion of life skills
- Problem identification and referral
- Treatment of Dually Diagnosed Adolescents
- Multi Dimensional/Systemic Therapies
- Crisis services
- Service Continuity

Chapter III – Population and Prevalence

In this Chapter you will find the following:

- ☑ State to State and National Comparisons
- ☑ Prevalence Rates
- ☑ Treated Prevalence
- ☑ Maps of LME Levels of Treated Prevalence by Population
- ☑ Per Capita Expenditures
- ☑ Rates of Community versus State Facility Service

State to State Comparison

The initial Gap Analysis compares NC to other states in order to get a relative picture of the service system and its barriers. In any state citizens often have many reasons why their state is unique, why it cannot afford more care or increase funding through other resources, or implement certain practices, etc. To insure those arguments are objectively viewed we reviewed data from several sources including The National Association of State Directors of Developmental Disabilities (NASDDDS), Kaiser State Health Facts, FY 2002 state statistics from the National Association of Mental Health Program Directors (NASMHPD) National Research Institute and from the FY 2003 and 2004 Center for Mental Health Services (CMHS) of SAMHSA's National Mental Health Information Center (which is within the Substance Abuse and Mental Health Services Administration of the U.S. Department of Health and Human Services) Uniform Reporting System Output Tables.

There are estimated to be 22% of North Carolinians who are uninsured which is only slightly above the national average. The NC enrollment in Medicaid is below national average. The median income in NC, however, is \$5,473 less than the national average. Those living below 100% of the Federal Poverty Level exceed the national average by 3%. This information suggests that more NC citizens should be potentially eligible for Medicaid, compared to recent levels of enrollment. Exhibit 3 provides income comparison data with US averages⁴.

Exhibit 3

Comparison North Carolina & US Income Averages 2004						
	Total Exp. Per Capita	State GF Medicaid %	FPL <100 %	FPL 100- 199 %	Median Income	Unemployment Rate 4/06
United States	4,009	16.9	17	19	44,473	4.7
North Carolina	3,758	13.5	20	21	39,000	4.3

⁴ Kaiser Commission on Medicaid Facts, Medicaid and the Uninsured; 1330 G Street, NW, Washington, D.C. 2005.

Data from the National Survey of Drug Use and Health (NSDUH)) is useful in providing a beginning reference point of national access to mental health care. The 2002 NSDUH found that 13% of Americans receive some form of mental health treatment per year. This includes inpatient treatment (0.9%), Outpatient Treatment (7.9%) and behavioral medication (10%). It found that 8.2% of the population received either mental health specialty outpatient or inpatient treatment, leaving roughly 4.8 % of the population receiving behavioral health medications only, presumably from primary care physicians. From an analysis of the treated prevalence and services received we know that the NC system is serving more people in hospital settings than the national average, fewer in specialty services and far more than the average in traditional outpatient settings. This could indicate a lack of mid range services.

Enrollment Comparisons

Since differing eligibility criteria can result in different enrollment profiles, we analyzed the percentage of each state's Medicaid enrollment that fell into the following major eligibility categories:

- Aged, blind and disabled – this group has the highest level of service utilization based on their age and disability status;
- Adult Income eligible – this group is mostly women and children, overall a healthy group; and
- Foster children – this group has higher needs for mental health services than other children and this group's utilization falls between that of disabled and income eligible enrollees.

Kaiser Foundation data for 2003 shows that NC at 17% is 2% below the national average of 19% for Medicaid enrollment as a percent of total population. However, NC is 2% higher at 16.9% than US averages of 14.2% for enrollment of the disabled.

Exhibit 4

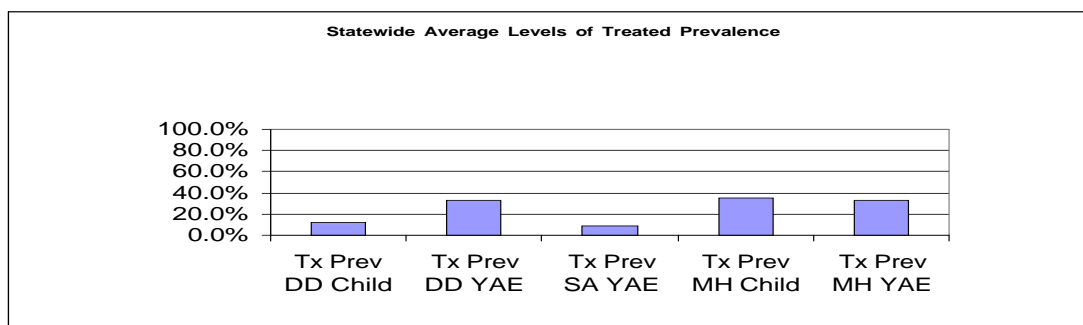
Medicaid Medically Needy Enrollees by Eligibility 2003				
	Elderly	Disabled	Children	Adults
United States	10.5	14.2	49.6	25.6
North Carolina	12.9	16.9	51.5	18.7

Prevalence and Treated Prevalence

Measuring treated prevalence (or how many of the population in need are actually served) against the Prevalence (or the estimated number of those with the condition) provides a ratio that indicates how well the state is meeting mental health needs within the general population. Compared nationally, NC is above the average in overall treated prevalence for mental health disorders with a treated prevalence rate of 28.6 per 1000 population with the national average being 19.3⁵. The established prevalence is 3.4% for children with developmental disabilities (0-18); 0.79% for persons over age 19 with developmental disabilities; 6.6% for persons with substance abuse disorders ages 15-54; 10% for children with serious emotional disturbances; and 5.8% for adults with mental illnesses.⁶

The treated prevalence for NC's public MH/DD/SA system is 12.2% for children with developmental disabilities; 32.64% for adults with developmental disabilities; 8.4% for persons with a substance abuse disorder; 34.3% for children with serious emotional disturbances and 33.4% for persons with mental illnesses. The 2006 data going forward may look quite different for children with an observable decline in treated prevalence due to the recent decision of the Division to not provide services in the school setting except in extraordinary circumstances for children with developmental disabilities. Exhibit 5 compares the treated prevalence for each primary disability cohort within the State.

Exhibit 5



⁵ CMHS Uniform Reporting Output Tables 2004

⁶ Hendershot, Gerry; *Statistical Analyses Based on the National Health Interview Survey on Disability: A Bibliography and Summary of Findings*; April 8, 2005; Human Services Research Institute – www.HSRI.org; Friedman, R.; Katz-Leavy, J.; Manderscheid, R.; and Sondheim, D., *Prevalence of serious emotional disturbance in children and adolescents* in R.W. Manderscheid and M.A. Sonnenschein, (Eds.) *Mental Health, United States, 1996*. DHHS Publication No. (SMA) 96-3098, Washington D.C.: U.S. Government Printing Office. pp. 77-91.; *Problems in Defining Mental Retardation and Developmental Disability: Using the National Health Interview Survey*. (2005); <http://rtc.umn.edu/nhis/pubs.html>; Bourdon, K.A.; Rae, D.S.; Narrow, W.E.; Manderscheid, R.W. and Regier, D.A. *National prevalence and treatment of mental and addictive disorders*; In R.W. Manderscheid and M.A. Sonnenschein, (Eds.); *Mental Health, United States, 1994*. DHHS Publication No. (SMA) 94-3000, U.S. Government Printing Office; Washington D.C., pp. 22-51.

Exhibit 5 estimates treated prevalence by dividing the total number served in each disability group by disability specific estimates of prevalence. This gives us the number of people in need of services at the LME-level relative to the number of persons being served in each LME. Age cohorts are represented by the terms “child”, “Y” for youth, “A” for adult and “E” for elderly. Exhibits 6 and 7 provide further detail on treated Prevalence for individuals with developmental disabilities by LME.

Exhibit 6

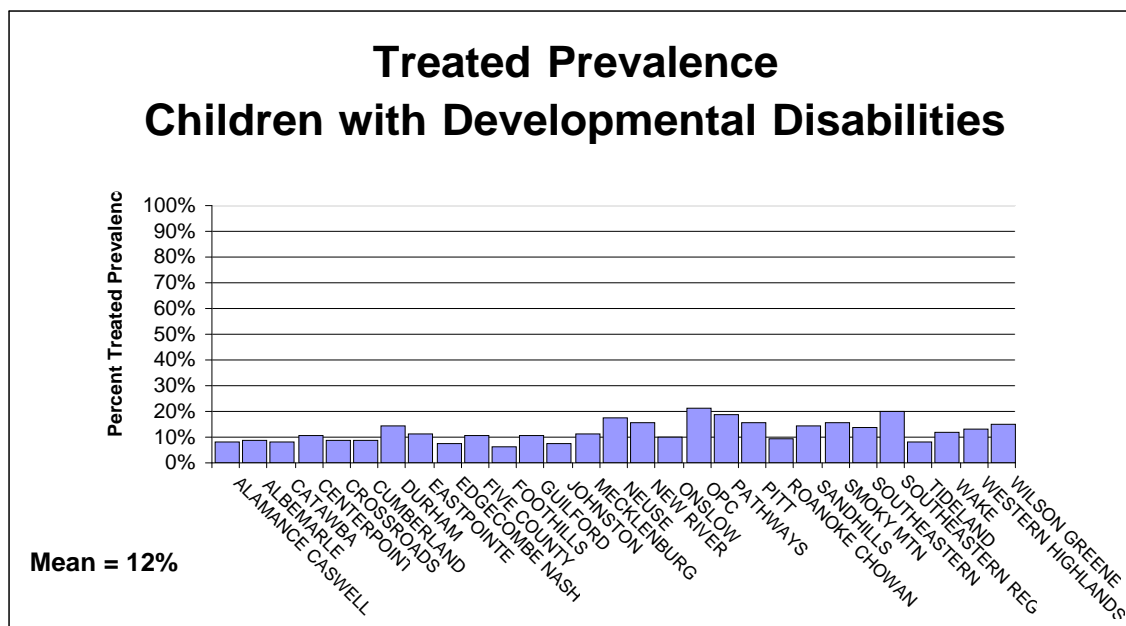
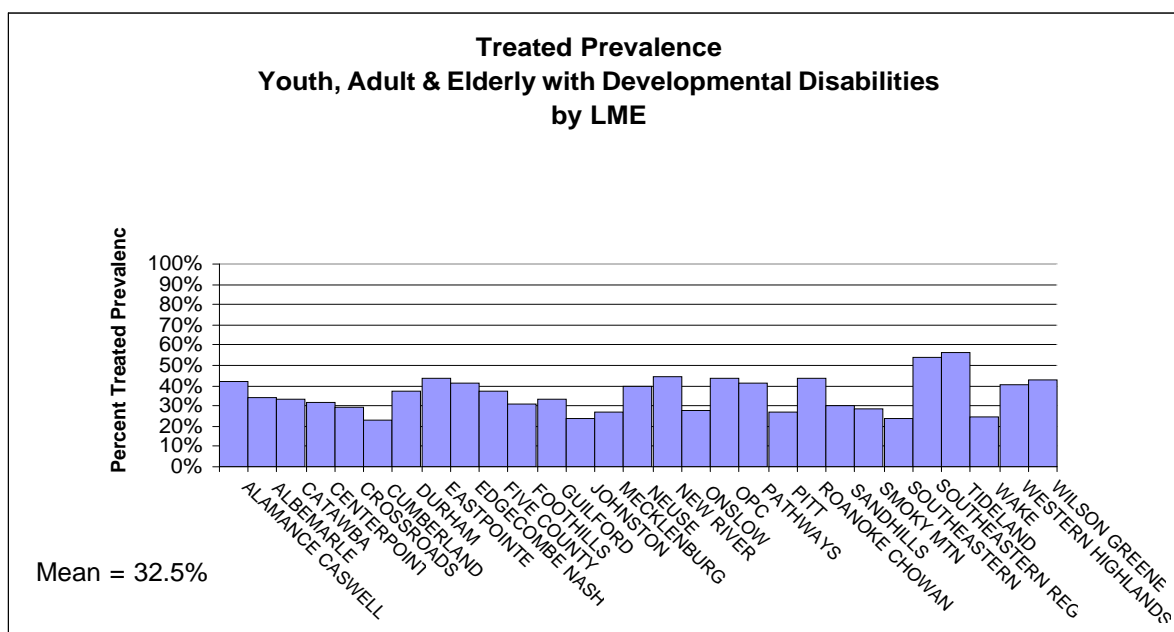


Exhibit 7



Persons with Developmental Disabilities –

The Surgeon General's Report estimates a developmental disabilities prevalence rate of 2.8% for children and 0.5% for adults. This report, however, has used the National Health Interview Survey's Disability Supplement (NHIS-D) to estimate the prevalence of mental retardation and/or developmental disabilities among the non institutionalized population of the United States. The estimated prevalence from that report is 3.4% for children with developmental disabilities and 0.79% for adults with developmental disabilities.

The National Health Interview Survey (NHIS) is a household survey conducted by the U.S. Bureau of the Census annually since 1957. The NHIS focuses on the civilian, non institutionalized population in the United States. Each year the NHIS randomly samples approximately 46,000 households with 116,000 members from 201 primary sampling units nationally. In 1994 and 1995, a special two-year Disability Supplement was added to the NHIS to gather nationally representative data on the characteristics, service use, needs, circumstances and experiences of non-institutionalized people with disabilities in the United States.

The Federal definition of developmental disability includes the following areas: 1) self-care, 2) expressive or receptive language, 3) learning, 4) mobility, 5) self-direction, 6) capacity for independent living, and 7) economic self-sufficiency. The study estimated that there were 14.9 people with mental retardation or developmental disabilities for every 1,000 people in the non-institutionalized population of the United States.

It is estimated that NC has 64,311 children with Developmental Disabilities (DD) and 48,951 adults with DD. The NC treated prevalence is 12.2% of those in need or 7,074 children with DD and 32.64% of those in need or 15,664 adults with DD. Individuals with DD make up just 1.3 % of all Medicaid recipients but 9.5 percent of Medicaid spending nationally (about \$52,000) per person per year.

The Medicaid Home and Community Based Services (HCBS) program is associated with the ICF-MR program through its dedication to persons who but for the services available through the Medicaid HCBS program would be at risk of placement in an ICF-MR. One indicator of the variation among states in ICF-MR expenditures is the average expenditure for ICF-MR services per resident of the state. Nationally, in FY 2005, the average daily expenditure for HCBS per citizen was \$57.89. The average varied from more than twice the national average in eight states (Connecticut, Maine, Minnesota, New Mexico, New York, Rhode Island, Vermont and Wyoming) to one-third or less of the national average in four states (District of Columbia, Mississippi, Nevada, and Texas). The variability in total and per citizen expenditures among states is affected by both the number of persons who received HCBS and the amount of money spent per recipient. Based on SFY 2005 data CAP Waiver recipients made up 61% of the combined total of ICFMR/Waiver recipients. The national combined percent of total was

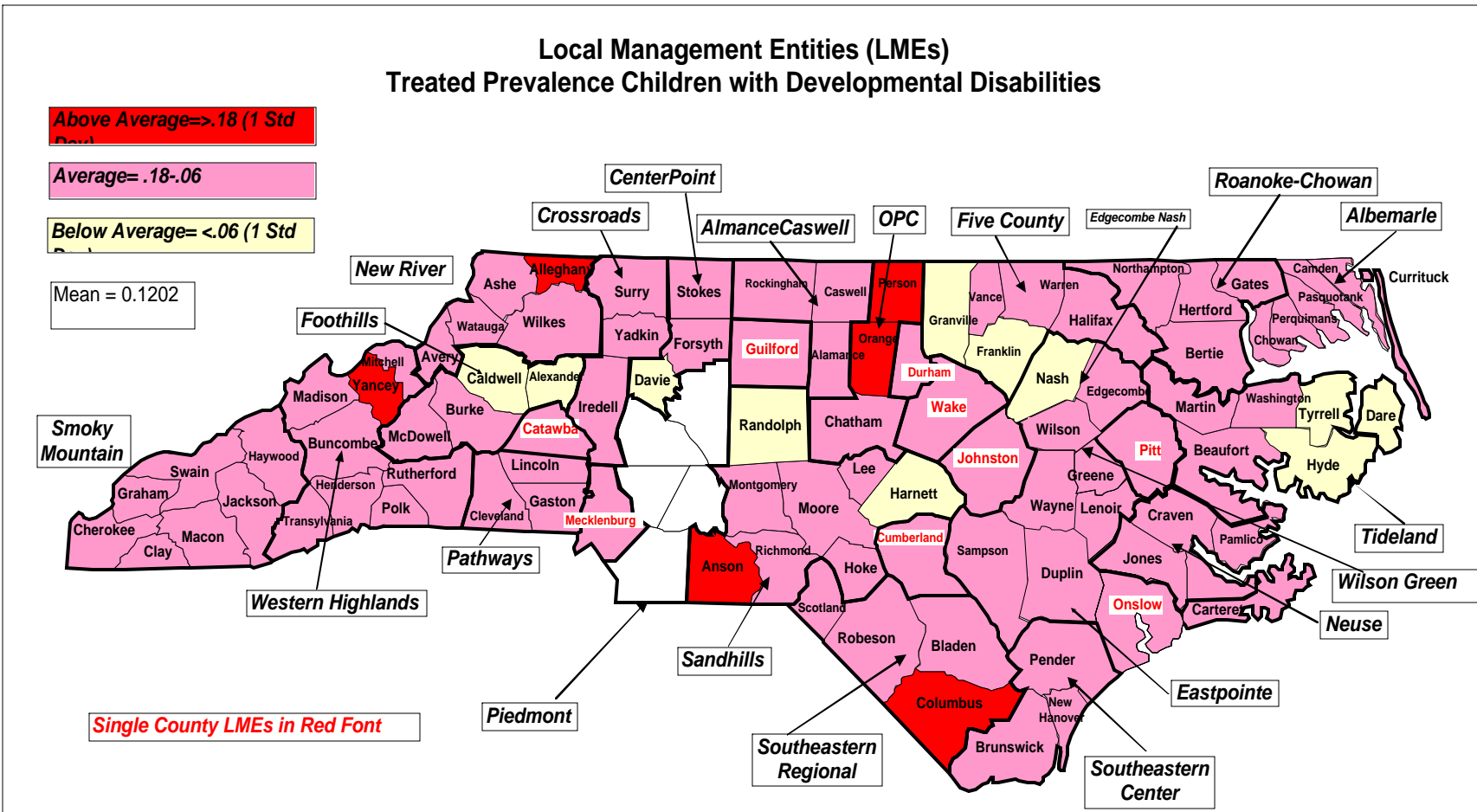
81.3%.⁷ Nationally 18.3% were enrolled and receiving ICFMR while that number was 38.9% in NC. It would be advantageous to NC to increase the number of citizens in the Cap program while decreasing ICFMR to place people in smaller community settings with 64.52% of the expenses paid by the Federal government.

The State has expanded CAP enrollment to assist those individuals not in ICFMR services. Since March 2006, NC has enrolled 3050 individuals in the CAP. Another 200 are expected soon. These figures were not available for inclusion in the models developed but should be considered in State planning when using the Models.

Exhibits 8 and 9 demonstrate county by county treated prevalence within plus or minus one standard deviation of the mean.

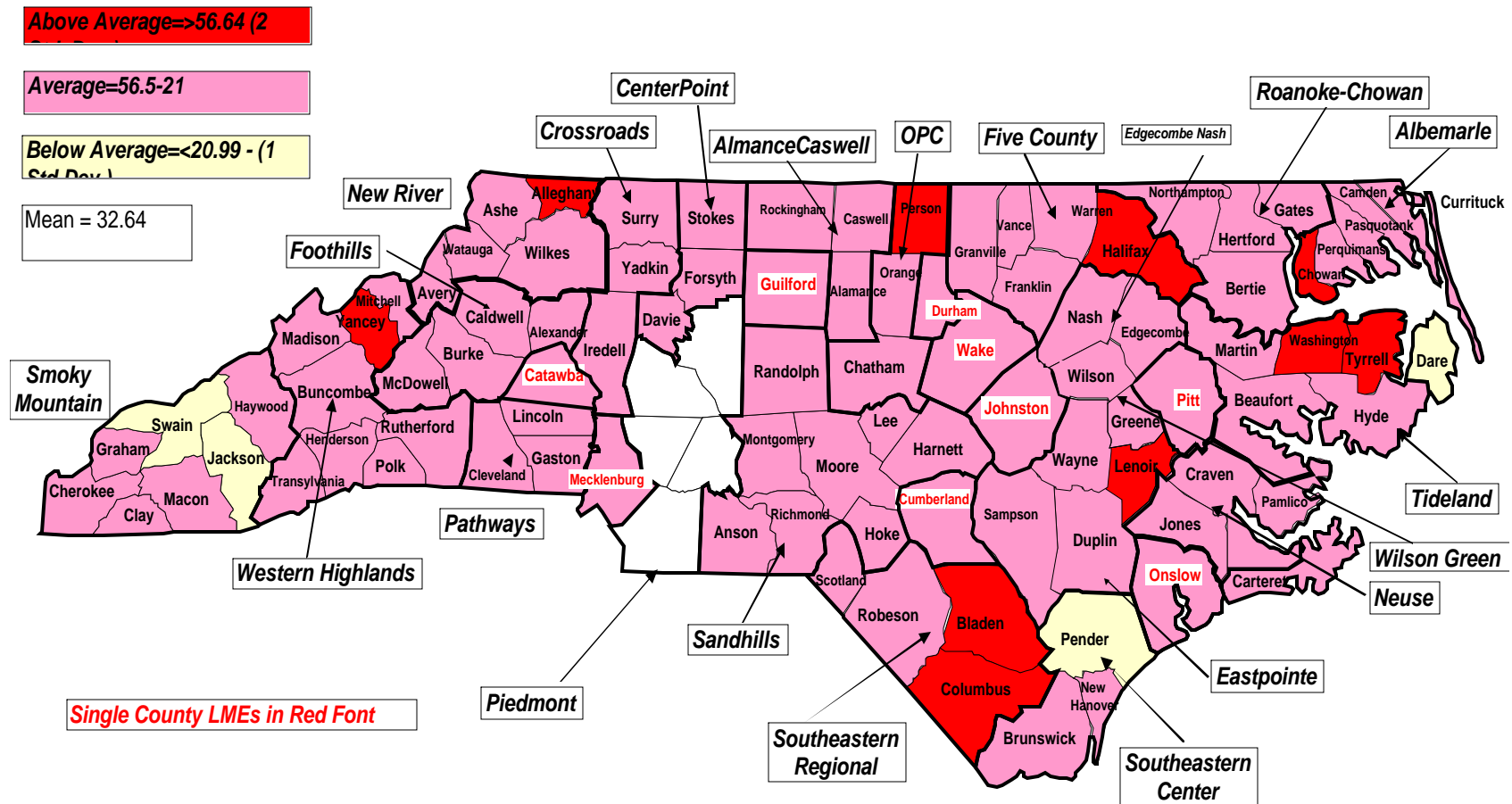
⁷ Residential Services for Persons with Developmental Disabilities: Status and Trends through 2005; July 2006; Research and Training Center on Community Integration, University of Minnesota.

Exhibit 8



*Note Piedmont Data was not provided for any of the analyses.

Local Management Entities (LMEs)
Treated Prevalence Adults with Developmental Disabilities



*Note Piedmont Data was not provided for any of the analyses

Mental Health

It is estimated that NC has 355,738 Adults with Serious Mental Illness (SMI) and 192,371 Children and Adolescents with Serious Emotional Disturbances (SED). In FY 05 the public mental health system served 66,067 children with SED and 118,802 adults with SMI. Youth 17 and under have a somewhat higher prevalence rate at 10% than the adult rate at 5.8%⁹. The treated prevalence rate for children with SED is 34.3% and for persons with SMI 33.4%. The following Exhibits 10 and 11 show treated prevalence by LME. The reader is cautioned that treated prevalence at the statewide average is not adequate and is being increased through modeling processes. Therefore, LMEs above the mean may be serving an appropriate level of prevalence.

Exhibit 10

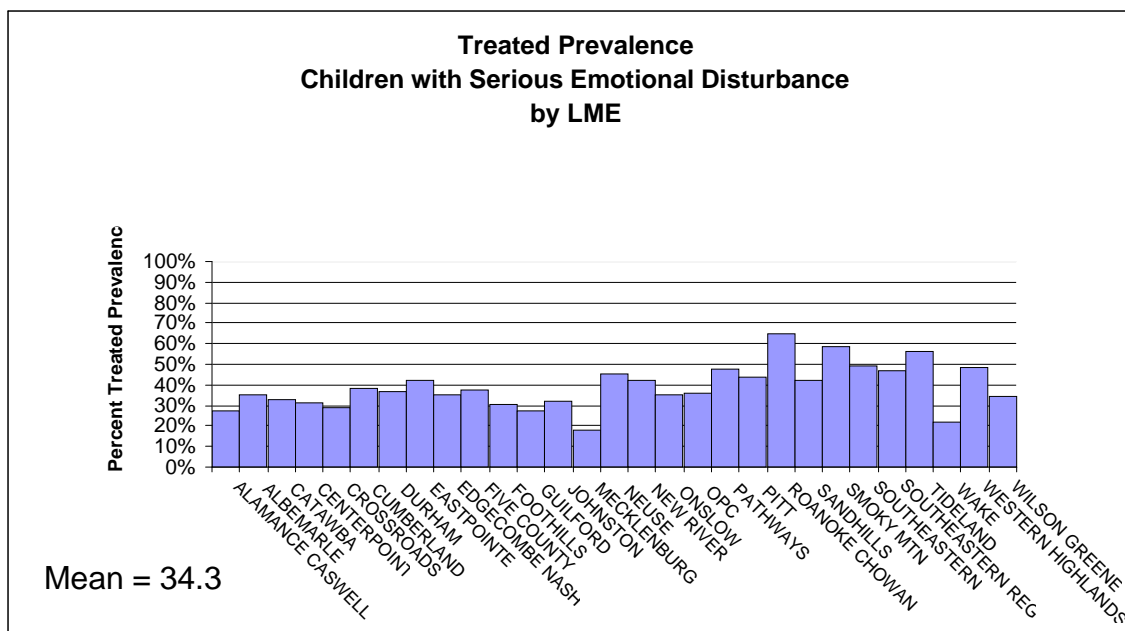
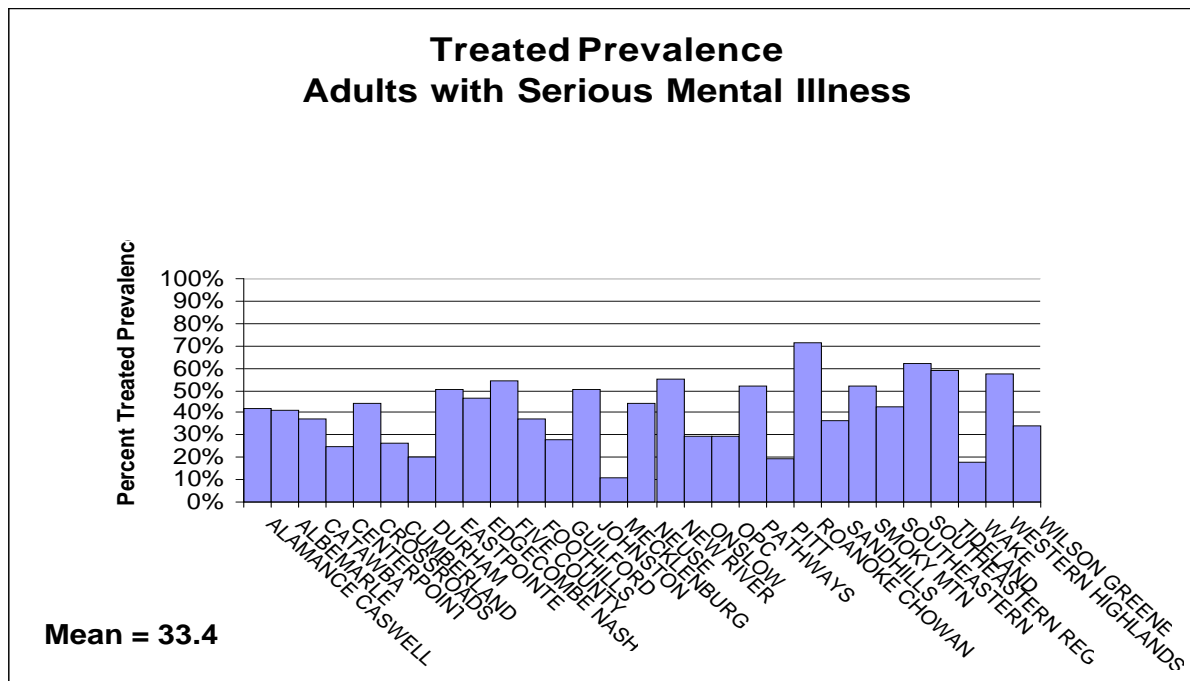


Exhibit 11

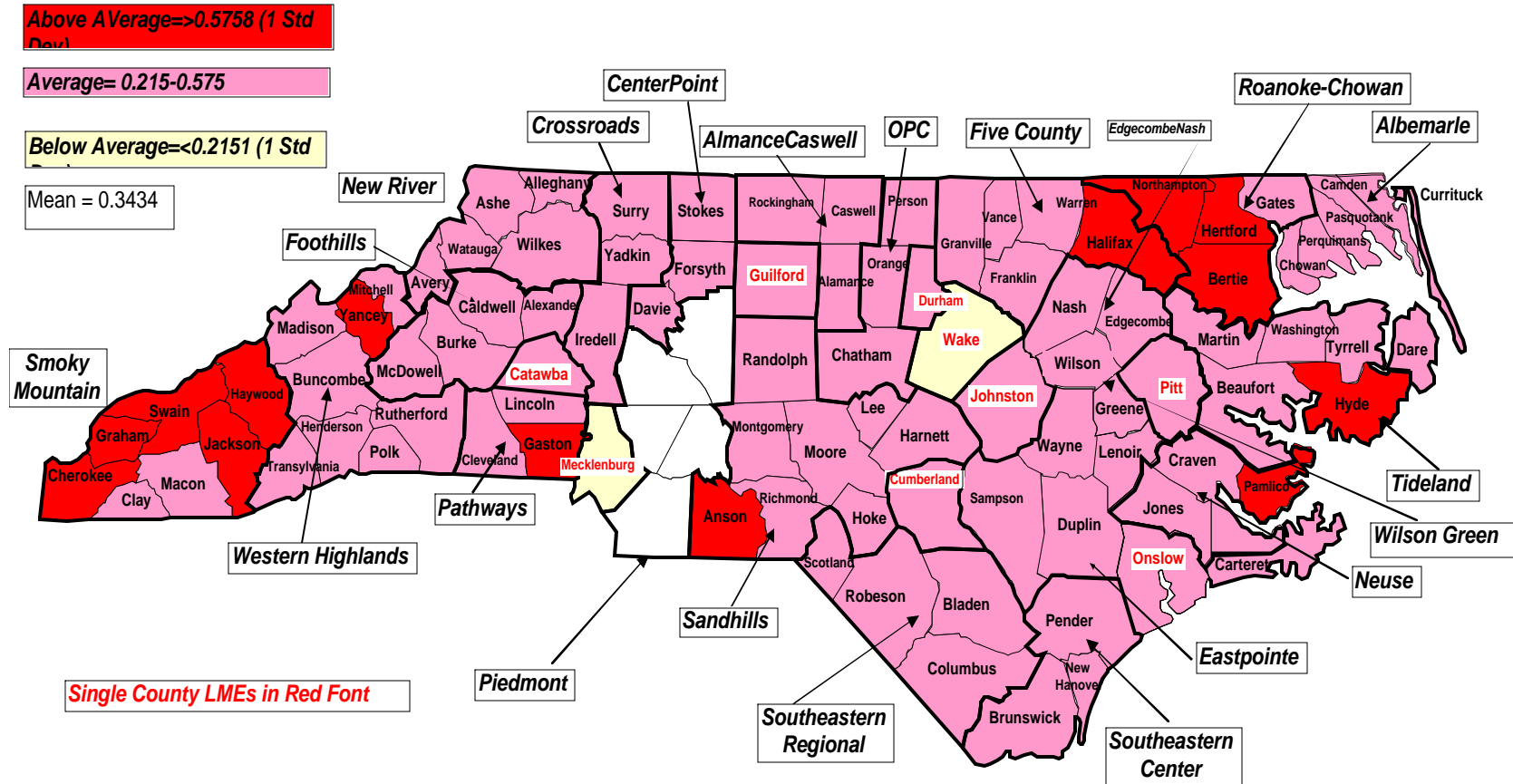


The 16-State Study produced by the National Association of State Mental Health Program Directors Research Institute, Inc. (NRI) under Contract with the U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, Division of State and Community Systems Development found that states vary substantially in treated prevalence rates for persons with mental illnesses. This variation may be due to the different organizational structures, definitions for priority populations, and financing arrangements of the states. The study found the minimum to be 8.52 per 1000, 16.85 per 1000 as a median and a maximum of 32.8 per 1000. This study is an example of how important it is for states to continue specific prevalence and penetration studies that are based on consistent methods on an annual basis.

Map Exhibits 12 and 13 provide a snapshot of treated prevalence by counties in NC for mental health.

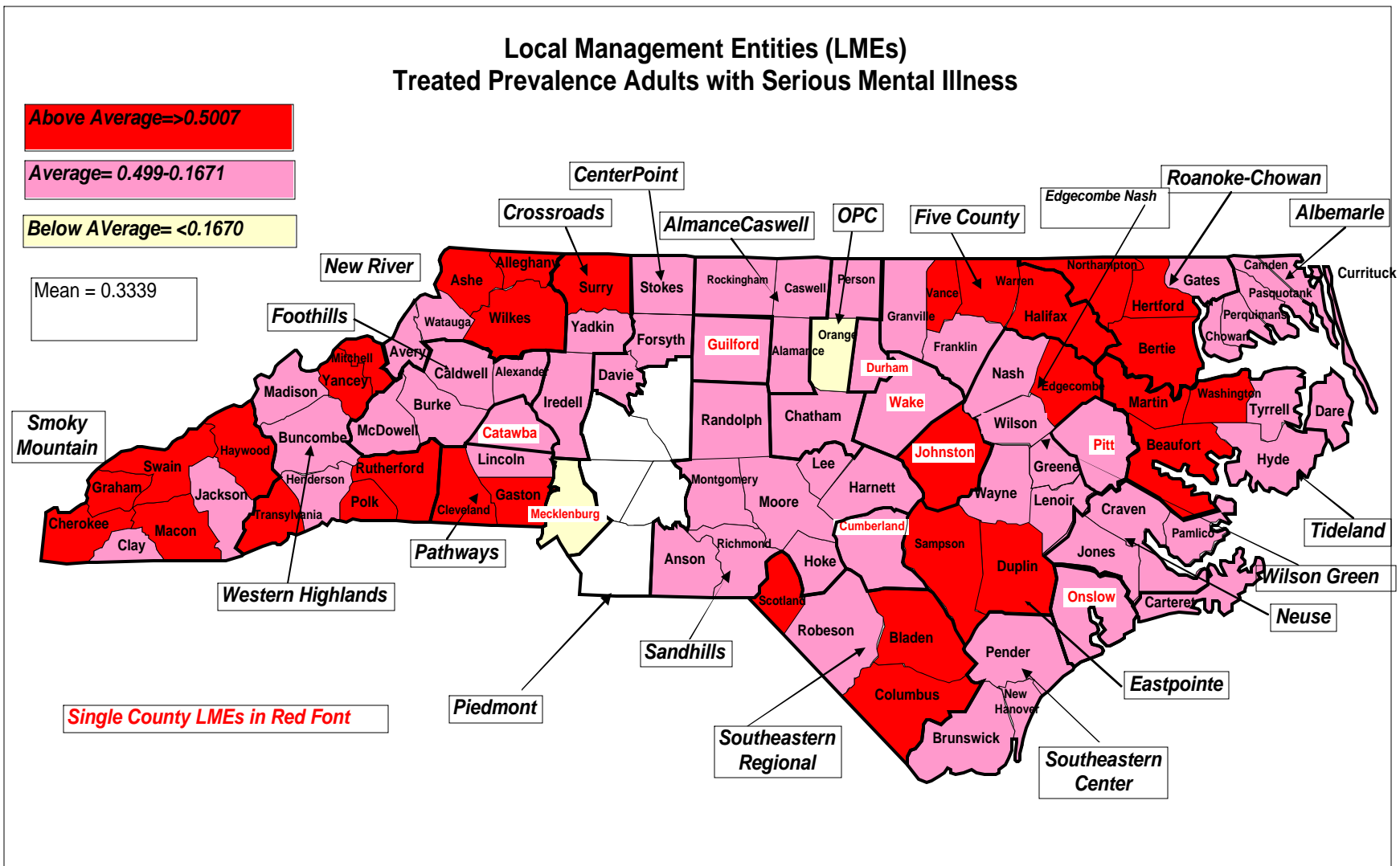
Exhibit 12

Local Management Entities (LMEs) Treated Prevalence Children with Serious Emotional Disturbances



*Note Piedmont Data was not provided for any of the analyses.

Exhibit 13



*Note Piedmont Data was not provided for any of the analyses.

NC's per capita spending on mental health is one of the lowest in the nation at \$16.80. The Center for Mental Health Services (CMHS) is the federal government agency within the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) that leads national efforts to improve mental health treatment services for all Americans. Exhibit 14 is a 2003 table from CMHS that compares all States on per-capita expenditures and the percentage of their total budgets spent on various types of services for mental health populations as reported by the states. It can be seen that North Carolina is ranked 43 out of 51 States submitting data in FY 2003. While the national average percentage of expenditures spent on Inpatient Programs is 37.1 %, (median value = 42%) NC spent 65.5 % of total expenditures in this category. When compared to other states North Carolina is also spending less of its total level of spending on community services at 32.1% and spending more than most states on state hospital services. Exhibit 14 presents per capita expenditures in FY 2003 for 51 States, sorted from least to most in total expenditures per capita. The per capita expenditure includes the state share of Medicaid for community services, mental health block grant funds, other SAMSHA funds, other Federal funds and State dollars. Readers should be aware that not all states report data consistently and may differ in how they calculate treated prevalence which could affect conclusions drawn from the data. The State Hospital admission rates in NC are 1.26 per 1000 population which places it number 50 among the states compared to the national average of 0.61 per 1000 persons.⁸

⁸DRAFT 2004 CMHS Uniform Reporting System Output Table 8/26/2005 (SAMSHA)

Exhibit 14

Per-Capita Expenditures for State Mental Hospitals, Community-based Programs, and State Mental Health Support Activities by Type of Service Setting, for FY 2003

STATE	Inpatient	Inpt %	Other 24-Hour Services	Other 24-Hour Serv %	Less than 24-Hr Services	Less than 24-Hr serv %	Other Services	Other Services %	Training & Admin	Training and Admin %	Total	Rank of Total
New Mexico	\$11.85	41.1%	\$1.34	4.6%	\$15.62	54.2%	\$0	\$0	\$0.00	0.0%	\$28.80	51
Arkansas	\$9.42	31.9%	\$9.43	31.9%	\$9.03	30.5%	\$0	\$0	\$1.69	5.7%	\$29.57	50
Idaho	\$14.00	41.6%	\$4.15	12.3%	\$13.90	41.3%	\$0.01	0.0%	\$1.63	4.8%	\$33.69	49
Florida	\$22.16	58.3%	\$5.25	13.8%	\$9.93	26.1%	\$0	\$0	\$0.65	1.7%	\$37.99	48
Texas	\$17.44	44.7%	NA	NA	\$20.31	52.1%	\$0	\$0	\$1.26	3.2%	\$39.02	47
Oklahoma	\$17.61	44.7%	\$0.40	1.0%	\$19.24	48.8%	\$0	\$0	\$2.18	5.5%	\$39.43	46
West Virginia	\$27.14	55.7%	NA	NA	\$0.00	0.0%	\$21.28	43.7%	\$0.33	0.7%	\$48.74	45
Georgia	\$22.01	44.1%	\$4.42	8.9%	\$0.00	0.0%	\$21.82	43.7%	\$1.63	3.3%	\$49.88	44
North Carolina	\$32.94	65.5%	\$0.94	1.9%	\$0.00	0.0%	\$16.12	32.1%	\$0.25	0.5%	\$50.26	43
Kentucky	\$24.22	47.2%	\$6.71	13.1%	\$18.32	35.7%	\$0	\$0	\$2.02	3.9%	\$51.27	42
Louisiana	\$31.81	62.0%	\$1.09	2.1%	\$16.15	31.5%	\$0	\$0	\$2.28	4.4%	\$51.34	41
Oregon	\$26.02	46.1%	\$15.10	26.7%	\$13.36	23.7%	\$0.78	1.4%	\$1.23	2.2%	\$56.49	40
Nebraska	\$38.54	66.1%	\$3.54	6.1%	\$14.92	25.6%	\$0	\$0	\$1.30	2.2%	\$58.29	39
Alabama	\$23.39	38.4%	\$15.55	25.5%	\$18.13	29.8%	\$2.38	3.9%	\$1.49	2.4%	\$60.95	38
Ohio	\$17.15	27.7%	\$3.84	6.2%	\$38.52	62.1%	\$0	\$0	\$2.51	4.0%	\$62.03	37
Nevada	\$17.64	28.1%	\$2.45	3.9%	\$41.50	66.1%	\$0	\$0	\$1.19	1.9%	\$62.78	36
South Dakota	\$42.71	64.8%	\$0.52	0.8%	\$22.66	34.4%	\$0	\$0	\$0.00	0.0%	\$65.89	35
Illinois	\$35.37	53.5%	\$8.30	12.5%	\$20.67	31.3%	\$0	\$0	\$1.78	2.7%	\$66.12	34
Colorado	\$17.61	26.6%	\$0.49	0.7%	\$0.00	0.0%	\$47.84	72.2%	\$0.36	0.5%	\$66.30	33
South Carolina	\$21.29	31.7%	\$9.42	14.0%	\$32.51	48.4%	\$0	\$0	\$3.97	5.9%	\$67.18	32
Missouri	\$32.42	48.2%	\$5.75	8.6%	\$27.33	40.6%	\$0	\$0	\$1.80	2.7%	\$67.30	31
Virginia	\$40.41	59.0%	\$4.72	6.9%	\$21.22	31.0%	\$0	\$0	\$2.20	3.2%	\$68.54	30
Utah	\$24.52	34.6%	\$7.57	10.7%	\$38.32	54.0%	\$0	\$0	\$0.50	0.7%	\$70.91	29
Indiana	\$23.20	32.1%	NA	NA	\$8.36	11.6%	\$40.25	55.6%	\$0.56	0.8%	\$72.37	28
Iowa	\$10.65	14.4%	\$13.85	18.8%	\$0.00	0.0%	\$47.69	64.7%	\$1.51	2.1%	\$73.70	27
Kansas	\$21.58	28.7%	NA	NA	\$0.00	0.0%	\$53.64	71.3%	\$0.00	0.0%	\$75.22	26
North Dakota	\$37.41	46.1%	\$10.90	13.5%	\$32.70	40.3%	\$0	\$0	\$0.05	0.1%	\$81.06	25
Delaware	\$49.84	61.2%	\$6.95	8.5%	\$23.37	28.7%	\$0	\$0	\$1.24	1.5%	\$81.40	24
Alaska	\$31.60	37.2%	NA	NA	\$47.89	56.3%	\$0	\$0	\$5.57	6.5%	\$85.06	23
Tennessee	\$36.31	41.6%	NA	NA	\$48.73	55.9%	\$0	\$0	\$2.18	2.5%	\$87.22	22
Rhode Island	\$25.05	28.2%	\$11.50	13.0%	\$50.40	56.8%	\$0	\$0	\$1.79	2.0%	\$88.75	21
Wisconsin	\$43.41	47.7%	\$6.68	7.3%	\$40.60	44.6%	\$0	\$0	\$0.28	0.3%	\$90.98	20
Washington	\$34.78	38.2%	\$2.25	2.5%	\$51.66	56.8%	\$0.16	0.2%	\$2.16	2.4%	\$91.01	19
Mississippi	\$52.52	56.2%	\$0.26	0.3%	\$2.35	2.5%	\$37.38	40.0%	\$0.98	1.0%	\$93.49	18
Michigan	\$38.60	39.5%	\$14.96	15.3%	\$43.55	44.5%	\$0	\$0	\$0.67	0.7%	\$97.79	17
Wyoming	\$53.78	52.1%	\$12.42	12.0%	\$35.70	34.6%	\$0	\$0	\$1.38	1.3%	\$103.27	16
Massachusetts	\$31.34	29.5%	\$38.90	36.6%	\$32.76	30.8%	\$0	\$0	\$3.20	3.0%	\$106.21	15
California	\$26.70	24.4%	\$7.67	7.0%	\$63.12	57.7%	\$10.96	10.0%	\$0.89	0.8%	\$109.34	14
New Hampshire	\$37.02	31.6%	\$20.97	17.9%	\$48.32	41.2%	\$7.61	6.5%	\$3.22	2.7%	\$117.14	13
Minnesota	\$48.16	40.4%	\$15.58	13.1%	\$54.70	45.9%	\$0	\$0	\$0.63	0.5%	\$119.07	12
Montana	\$24.86	20.1%	\$47.84	38.8%	\$48.13	39.0%	\$0	\$0	\$2.58	2.1%	\$123.41	11
Hawaii	\$41.13	32.8%	\$32.48	25.9%	\$41.13	32.8%	\$0	\$0	\$10.63	8.5%	\$125.38	10
New Jersey	\$61.93	49.3%	\$13.89	11.1%	\$48.22	38.4%	\$0	\$0	\$1.57	1.2%	\$125.60	9
Arizona	\$19.77	15.6%	\$10.29	8.1%	\$93.70	74.2%	\$0	\$0	\$2.57	2.0%	\$126.33	8
Maine	\$40.03	31.3%	\$11.37	8.9%	\$73.99	57.8%	\$0	\$0	\$2.54	2.0%	\$127.92	7
Maryland	\$54.88	37.3%	\$23.29	15.8%	\$62.74	42.7%	\$0	\$0	\$6.16	4.2%	\$147.08	6
Connecticut	\$49.80	33.0%	\$23.76	15.7%	\$62.60	41.4%	\$0	\$0	\$14.87	9.8%	\$151.03	5
Vermont	\$26.33	17.3%	\$22.46	14.7%	\$99.36	65.2%	\$0	\$0	\$4.20	2.8%	\$152.35	4
New York	\$80.22	41.8%	\$23.27	12.1%	\$80.42	41.9%	\$0	\$0	\$8.17	4.3%	\$192.07	3
Pennsylvania	\$46.97	24.1%	\$2.41	1.2%	\$144.21	73.9%	\$0	\$0	\$1.42	0.7%	\$195.01	2
District of Columbia	\$138.62	33.5%	\$59.38	14.3%	\$170.46	41.2%	\$0	\$0	\$45.61	11.0%	\$414.08	1
Average (Mean)	\$33.78	37.1%	\$10.07	11.0%	\$45.30	49.7%	\$4.29	4.7%	\$2.27	2.5%	\$91.12	
Median	\$31.60	42.0%	\$8.30	11.0%	\$32.70	43.5%	\$0.00	0.0%	\$1.63	2.2%	\$75.22	

Substance Abuse-

It is estimated that NC has 401,507 children and adults with Substance Abuse (SA) disorders or 6.6% of the population. In FY 2005 the Public Mental Health System served 33,716 persons or 8.9% of persons of all ages with SA. This data is based on the actual 2005 claims data provided by the Division with prevalence statistics applied.

Findings indicate the need to:

- Improve screening in the emergency room to identify alcohol or drug disorders and mental illness;
- Strengthen linkages between the emergency room and the chemical dependency and mental health treatment systems to increase penetration rates, especially for alcohol or drug treatment; and
- Ensure that treatment systems have sufficient capacity for increased demand that would likely arise from improved screening and referral from emergency room settings.⁹

Substance abuse inpatient care shows a rate of 9%.¹⁰ It is the author's opinion that spending is critically low in NC for those individuals with substance abuse disorders. Since few of these recipients have Medicaid, it may be incumbent upon the State to focus efforts in state funding strategies here to close this huge gap in service.

Exhibits 15 and 16 that follow show consistently low treated prevalence even in those areas that are above the statewide average.

⁹ Substance Abuse Treatment Rates and Percentage of Treatment Admissions with Abuse of Specific Substances, by Age Group and Fiscal Year, Baltimore 2003

¹⁰ State Profile - North Carolina National Survey of Substance Abuse Treatment Services (N-SSATS) is an annual survey of facilities providing substance abuse treatment conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) 2004.

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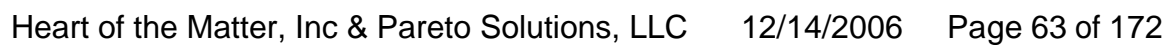
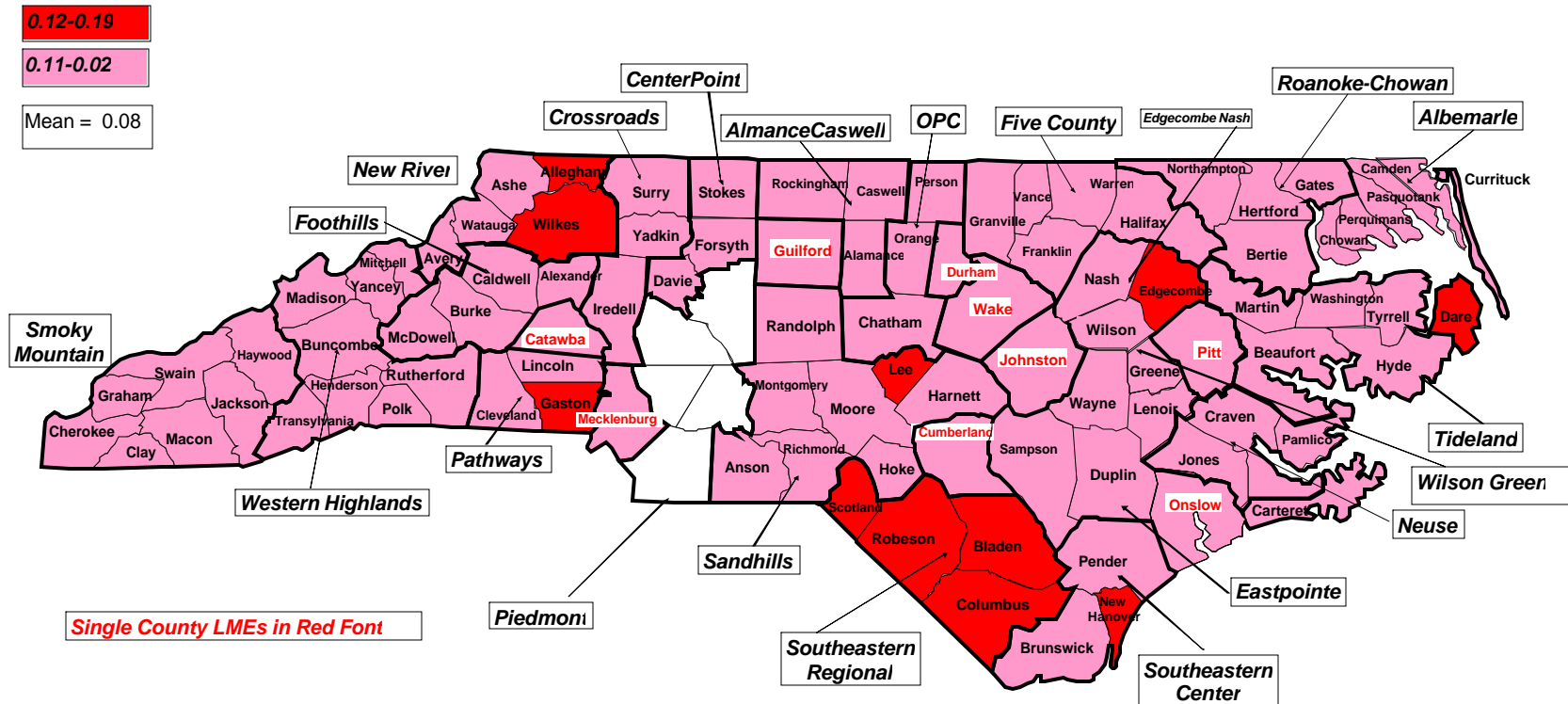


Exhibit 16

Local Management Entities (LMEs) Treated Prevalence Substance Abuse All Ages



*Note Piedmont Data was not provided for any of the analyses.

Summary - Gaps in Treated Prevalence

Among LMEs in the State, the following summarizes their status relative to the 2005 statewide average for treated prevalence:

- Children with developmental disabilities –Most Counties were within plus or minus one standard deviation of the statewide weighted average of 12.2%.A few were in the higher range but still with a treated prevalence of less than 25%. The “Continuity” Factor¹¹ demonstrated that for children with developmental disabilities all counties were near the state average for continuity at .68.
- Adults with developmental disabilities – Ten counties were serving more consumers than would be expected compared to the statewide average. In fact these counties were 2 standard deviations above the mean. Only four counties were serving less than the number expected compared to a healthy statewide treated prevalence. For adults with developmental disabilities Thirty nine counties had an average caseload equal to the total caseload, suggesting strong continuity for this disability group of .78 for continuity.
- Persons with substance abuse disorders – The substance abuse treated prevalence is so low that it almost seems unimportant to map. Even those counties serving above the statewide average are not reaching the numbers of consumers that should be expected for the system. This is obviously a statement of funding priorities that should be examined in light of this information since the average continuity index is only around 0.2. It is also evident that this disability group does not receive adequate continuity of service and therefore are unlikely to be receiving the quality and quantity of care necessary to promote recovery.
- Children with Severe Emotional Disturbances – The two lowest counties in treating children were Wake and Mecklenberg, both large urban areas. There were 14 counties that were one standard deviation higher than the statewide average for treated prevalence. The continuity factor for child and adult mental health indicates 55 counties below the statewide average.
- Adults with Severe Mental Illness – The funding for this group is one of the lowest in the nation, and the state hospital use is twice the national average. There is a large spread in the treated prevalence for this group – from as high as 72% to as low as 10%. The continuity factor for child and adult mental health indicates 55 counties below the statewide average of approximately 0.3.

¹¹ The Continuity Factor is a mechanism for determining how consistently each client is seen throughout the year. The number is a result of dividing the monthly average caseload by the total annual caseload to determine continuity. The closer the number is to 1, the more consistently the client was seen.

Chapter IV – Service Utilization

In this Chapter you will find the following:

- ☑ Introduction to Capacity of NC's Community Based System
- ☑ Available Service Array
- ☑ Utilization by Age and Race
- ☑ Service Continuity Factor
- ☑ County by County Availability of EBPs - Maps
- ☑ Service Intensity- Level of service provided
- ☑ Screening, Triage & Referral

Service utilization is a foundation benchmark for measuring improvement in the state MH/DD/SA system. Overall, comparisons suggest that NC differs from other randomly selected States and from the nation in its provision of services. The service amount and type are slightly higher than national averages for persons with DD, near average for children with SED and are below national averages for persons with mental illness and very low for persons with substance abuse disorders. An emphasis should be placed on raising the treated prevalence for persons with mental illnesses and persons with substance abuse disorders, but also increasing programs that cross all disability groups that need to be implemented or strengthened. These areas include EBPs specifically related to work, housing and increased family support and education.

Developmental Disabilities

The major area for improvement with DD services is to phase down “work” and “day” programs that are not best practices and large residential programs, and implement supported employment and supported independent housing. The focus needs to be shifted in the delivery of those services to inclusion and integration especially for new persons entering the system. This transition will require extensive training and monitoring of direct care providers and staff. Existing services that support work and living in independent housing need to be expanded and emphasized.

Employment

Achieving employment outcomes and making well-paid jobs a realistic option for people with developmental disabilities is important.

- Gradually reduce site-based programs.
- Advocate for Ticket to Work and ADA Compliance.
- Adequate Transportation
- Supported Employment should begin before the person leaves the school setting

A Safe and Affordable Home

- Address “aging parents” phenomenon.
- In House Support for people to live independently.
- Improving access to integrated community housing options/alternatives.
- Support individuals (and their families) who are self directing their services and supports.

Healthy Life Conditions

- Improving the quality and responsiveness of case management services

Meaningful relationships

- Enable community contacts to foster relationships with local neighbors, and work colleagues.

Family Support or Caregiver Training self-determination: Family support is any community based service that provides for vouchers, direct cash payments to families, reimbursement, or direct payments to service providers. Examples of family support programs include cash subsidy payments, architectural adaptation of the home, in-home training, sibling support programs, education and behavior management services and the purchase of specialized equipment. Family support emerged as a significant priority for MR/DD state agencies in the early 1980s. This type of support is necessary to enable families to stay together.

Giving back to the community

- Encourage and make opportunities available for volunteer work and participation in community events and projects.

In addition the State needs to consider the Independence Plus Waiver and a Medicaid Buy-In to implement increased employment. United Cerebral Palsy issued a Report in 2006 called A Case for Inclusion. This report was designed to cover all developmental and cognitive disabilities and not just physical disabilities. Their overriding conclusion was that all States still need improvement in how their Medicaid programs serve individuals with MR/DD and what outcomes are achieved.

Too many Americans with MR/DD are still not living in the community:

- 33 states have more than 80 percent of individuals living in community settings (under 16 total residents). However, just 11 states have more than 95 percent living in such arrangements.
- 18 states have more than 80 percent of individuals living in small residential settings (under seven total residents). However, just 4 states have more than 95 percent.
- Only 5 states have more than 80 percent of individuals living in home-like settings (under 4 total residents). None have more than 95 percent.

Too much funding for individuals with MR/DD is directed at large institutions rather than community-based services:

- Only 13 states direct more than 80 percent of MR/DD related money on home and community-based services. Yet, 33 states have more than 80 percent of recipients in home-and community-based service programs.
- Just 7 states direct more than 95 percent of related money on home and community-based services, despite 12 states having more than 95 percent of individuals served in this program.

Too many working-age individuals may not be engaging in meaningful activities as evidenced by low competitive employment participation:

- Just 17 states have more than a third of individuals participating in competitive/supportive employment.
- Just 2 states have more than half.
- Many states are not helping individuals transition from Medicaid to work:
- Only 27 states have Medicaid buy-in for people with disabilities who are working. (Although three more states passed legislation in 2005 to apply for this federal waiver.)

Too few states prioritize self-directed services as evidenced by participating in the Independence Plus waiver or providing significant personal assistance funding.

The Report Card for NC showed the following:

Home and Community Based Service Focus – D

Small Residential Settings – F

Reaching Those in Need – B

Services Self-Directed – B

Cost Efficiency – A

Overall - C

The changing system must continue to provide needed services to people without interruption during the change process and support them through transition periods. While reducing reliance on institutional care, a philosophy of person-centered support and services aimed at real life outcomes must be implemented through evidence based and best practice models that are proven to achieve the desired results in a cost effective way. These actions must be framed by a culture shift at all levels of the system. People working side-by side with consumers and families must become more customer oriented and actively demonstrate their caring and professionalism. Providers must demonstrate accountability. Consumers and families must adjust their expectations to include less segregation, new models and to incorporate community and natural supports in lieu of or in addition to paid supports.

Exhibit 17 below from the NADDDDS newsletter provides an interesting comparison of needs to the general public.

Exhibit 17

Specific Functional Limitations for People in the US Non-Institutionalized Population				
Functional Limitation	People with MR/DD			People w/o MR/DD
	Est. Pop.	RSE	%	
Economic self-sufficiency (18+ years)	1,313,891	3.9%	88.0%	1.7%
Learning	2,838,834	2.8%	73.0%	1.8%
Self-direction (6 + years)	1,761,735	3.5%	61.0%	1.0%
Independent living (18+ years)	679,711	5.2%	45.5%	0.2%
Language	1,490,597	3.6%	38.3%	0.2%
Mobility	395,210	6.4%	10.2%	0.1%
Personal care	367,875	6.4%	9.5%	0.01%

Limitations of Adults with MR/DD in the U.S. Non-Institutionalized Population			
Limitation	%	Est. Pop.	RSE
Receives help with ADL/IADLs*	65.7%	1,023,687	5.7%
Never left alone for 2+ hours	29.1%	528,784	6.7%
Needs ongoing supervision for safety reasons	25.1%	392,539	9.7%
Received services from a non-profit agency at some time	16.2%	251,807	10.9%
Has a guardian	16.5%	220,122	8.9%
Has difficulty leaving the house	14.0%	216,048	9.2%

* ADL – Activities of Daily Living (bathing, dressing, eating, using a toilet, getting in and out of bed)

IADL – Instrumental Activities of Daily Living (shopping, managing money, cooking, working around the house, using the telephone)

Adults with MR/DD in the U.S. Non-Institutionalized Population Waiting for Services			
Type of Service	%	Est. Pop.	RSE
Waiting for a Specific Service			
Mental health services	6.3%	98,099	17.2%
Case manager	5.5%	85,434	13.4%
Home, community-based or facility-based long-term care	2.5%	38,675	24.3%
Employment program or day activity center	2.2%	34,913	20.5%
Medical/ancillary services (e.g., OT, PT, Speech)	1.7%	27,125	25.8%
Needs or Tries to Get Help			
Needs additional help with one or more IADLs*	10.1%	151,390	11.0%
Needs help, attempted to hire services unsuccessfully ^a	35.8%	52,433	19.5%
Needs help but stopped receiving it ^a	16.7%	41,155	26.9%

*IADL – Instrumental Activity of Daily Living (Cooking, cleaning, shopping, money management)

^a Proportion of those who need more help

Mental Health and Substance Abuse

NC is not only getting services to fewer of its population with substance abuse and severe mental illness, but it is also providing a lower intensity of services and much poorer continuity of service to beneficiaries who do get services. A more detailed examination of the types of services provided and the characteristics of the people receiving services are one place to begin to describe the nature of the differences.

There is inequitable utilization of services across regions within NC. The service array is generally proportionately over reliant on facility or bed based services, out-of-home placements, traditional outpatient therapies, and relatively long term “day- type” programming and other “center-based services”. Services that are integrated and inclusive, rehabilitative, and supportive or recovery oriented are underdeveloped. In-home, wrap-around, psychosocial rehabilitation, supported housing, employment services, mobile crisis, intensive or assertive community treatment (ACT) and peer operated alternatives are either unavailable or under utilized in many parts of the State.

To get a better idea of how available these specific services are, we studied enrollment rates and utilization for the following services as they apply for both persons with mental illness and substance abuse (and in the case of supported employment for persons with developmental disabilities):

- Assertive Community Treatment Teams
- Community Detoxification
- Community Inpatient
- Drop-In
- Facility-Based Crisis
- Psycho-social Rehabilitation
- Respite
- Supported Employment

Data are then provided for state psychiatric hospitals, traditional outpatient and community rehabilitation services that include “workshops” as a means of comparison to EBP.

ACTT

The following Exhibits demonstrate by county and LME the persons served as a percentage of the total Youth, Adult and Elderly (YAE) prevalence and the average monthly units per user not adjusted for population or prevalence. Exhibit 18 maps persons served as percentage of YAE prevalence for ACTT. The majority of the State does not effectively have an ACTT program. Treated prevalence is 0.3%. In reviewing data from states with less state facility use than NC, one would expect rates in the range of 1.5 to 2.5 per 1000 treated prevalence which is closer to the two counties identified as positive outliers for ACTT in NC.

In Exhibit 19, the mean of 3.4 units of service per month is inadequate to prevent relapse and institutional care in this population. This constitutes a low level of intensity

of service. The State is homogeneous in provision of units of service probably because the service definition and claims requirements pay a large fee for one unit of service that is intended to cover multiple contacts. This method seems inadequate in that there is no financial incentive for a provider to perform at the needed level. It would be preferable to pay for this service on an encounter basis, folding in team meetings etc.

It is difficult to determine specifically how many LMEs have an ACTT program since the persons served rate is very low over 50 of the counties. However, in no case does the program cover the entire number of counties represented. Those with an inadequate intensity of ACTT service are also negative outliers for State Hospital use. The State is spending \$15,623,590 on the ACTT service.

NC ACTT has a significant negative correlation with treated prevalence suggesting that the program is not reaching the target population. There are also positive correlations with other services suggesting that people may be enrolled in multiple related services when ACTT is in fact a bundled service including: Supported Employment, Drop In, Respite, Community Inpatient and Psychosocial Rehabilitation (PSR). This problem was identified and fixed with the new 2006 service definitions. That data was not available to the authors, but there should be a significant difference between the 2005 data used here and the 2006 data following the introduction of the new definitions.

Exhibit 18

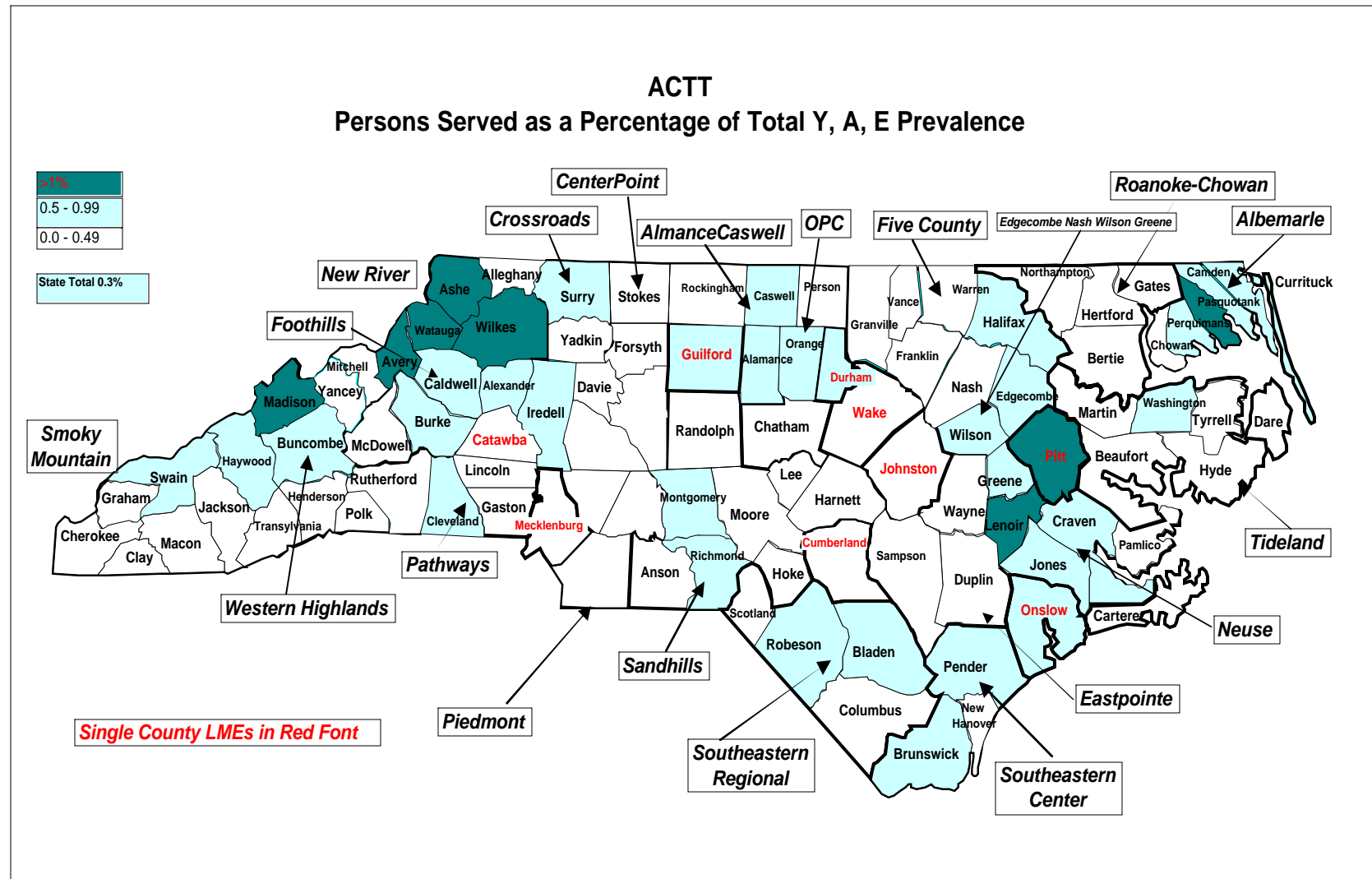
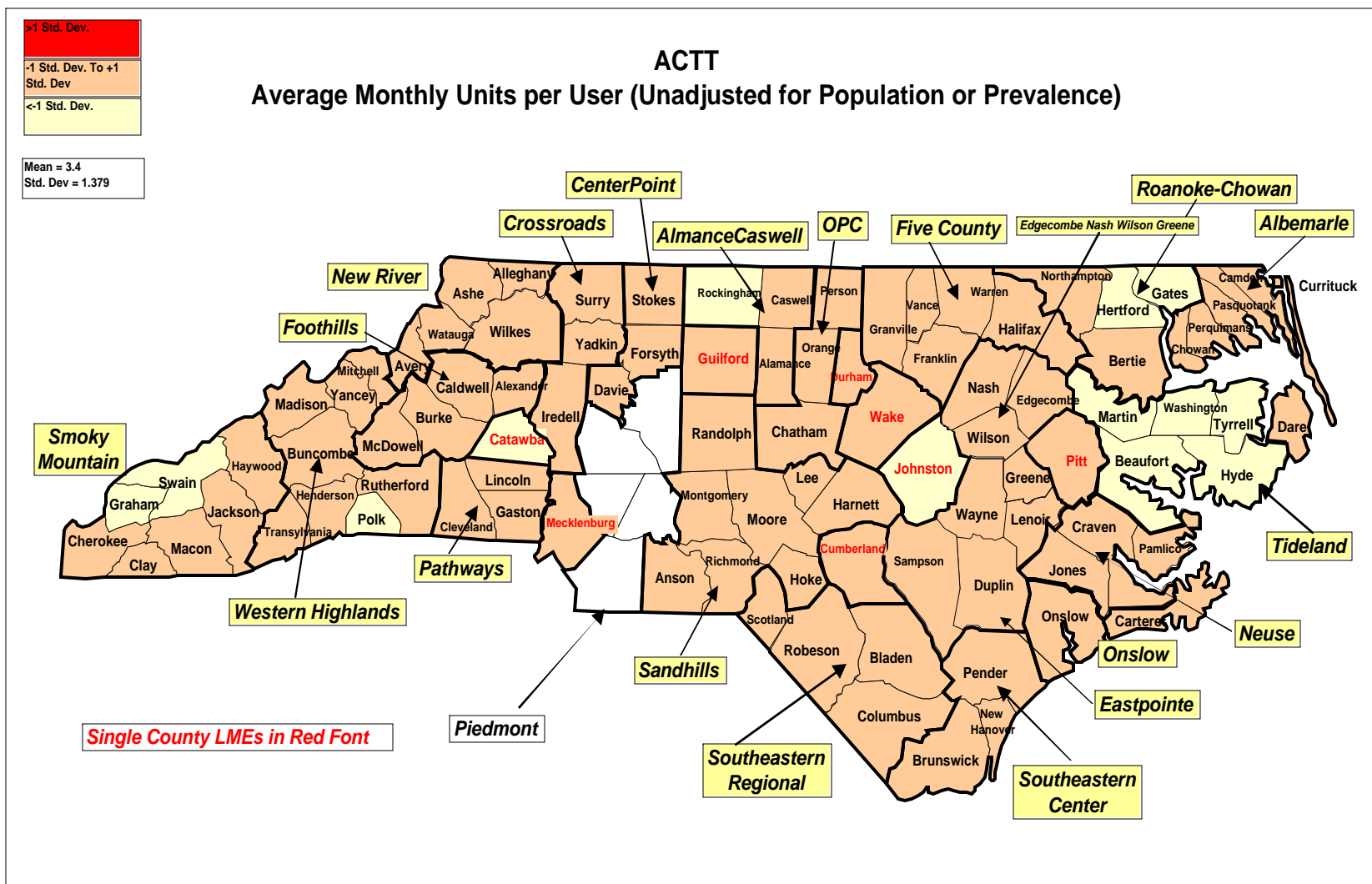


Exhibit 19



The critical issues with ACTT include:

- The level of care or intensity of service in each program (units per user per unit of time) in each county ACTT program is not sufficient and therefore not meeting ACTT model fidelity standards.
- The programs are not covering all parts of the LME region, primarily rural areas. That probably indicates the programs are not meeting fidelity standards and are “office based”.
- ACTT needs to be expanded to those programs that do not have an ACTT.

State issues:

- Expand programs to LMEs that don't have them
- Enforce Model Fidelity
- Monitor ACTT against hospital use for days and admissions as a performance indicator
- Change the method of payment and require encounter reporting.

Community Detoxification

Exhibits 20 and 21 show persons served as a percentage of total YAE prevalence and average monthly units per user not adjusted for population or prevalence for community detoxification services. The State average for persons served is 0.1%, almost negligible. Only 12 counties have a treated prevalence above 0 for this service. Exhibit 21 shows the average monthly units at 1.9, again short of an effective intervention. The counties providing more than the average number of units generally overlap with counties serving the most people.

The critical issues with community detoxification include:

- The provision of Community Detoxification services is negligible across the State.
- Even at the mean the service intensity and consumers served are very small. Service was provided statewide to 1049 people. The State spent \$557,857 on the service.
- The Baltimore study indicates that nine out of ten aged and disabled consumers who visited the emergency room 3 or more times in FY 2002 had a substance abuse disorder, a mental illness, or both. The State should be particularly interested in engaging persons with SA in treatment early and in providing a sufficient level of community care to reduce trauma for the consumer and to reduce community hospital emergency room costs as well as MH/DD/SA State Hospital admissions from those local hospitals. ¹²
- There is not a sufficient number of community detoxification programs statewide which ultimately results in the inappropriate use of state hospital services.
- Discharge planning, including referral to the appropriate level of care, is an essential component of detoxification services.

¹² **Substance Abuse Treatment Rates and Percentage of Treatment Admissions with Abuse of Specific Substances, by Age Group and Fiscal Year, Baltimore 2003**

- In addition, people are often admitted to State Facilities in NC without consideration for community based alternatives. The single entry system (LMEs) that would ensure uniform screening, care management to implement alternative care is essentially powerless in preventing state hospital admissions. The system should be made responsible for payment of State services when community alternatives are not available or not adequate to serve the consumer. The situation currently puts decision making in a number of hands that have other interests at stake, such as the State Facility that could have an incentive to maintain its population base to preserve jobs, or the community hospital that wants to get people out of their emergency rooms.

From visiting programs, it is clear that some NC programs provide community detoxification as a part of their Facility Based Crisis Program. It would be in the State's best interest since they are expanding Facility –Based Crisis services to require the program to have a community detoxification component. There is no sound clinical reason to separate the two and in fact EBP would support the integrated care of people with dual disorders. The combined service would have a greater return on investment and be more cost effective than operating separate programs. This would be a good way to ensure the availability of this important service statewide.

Community Detox
Persons Served as a Percentage of Total Y, A, E Prevalence

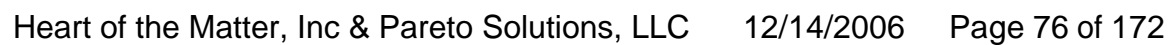
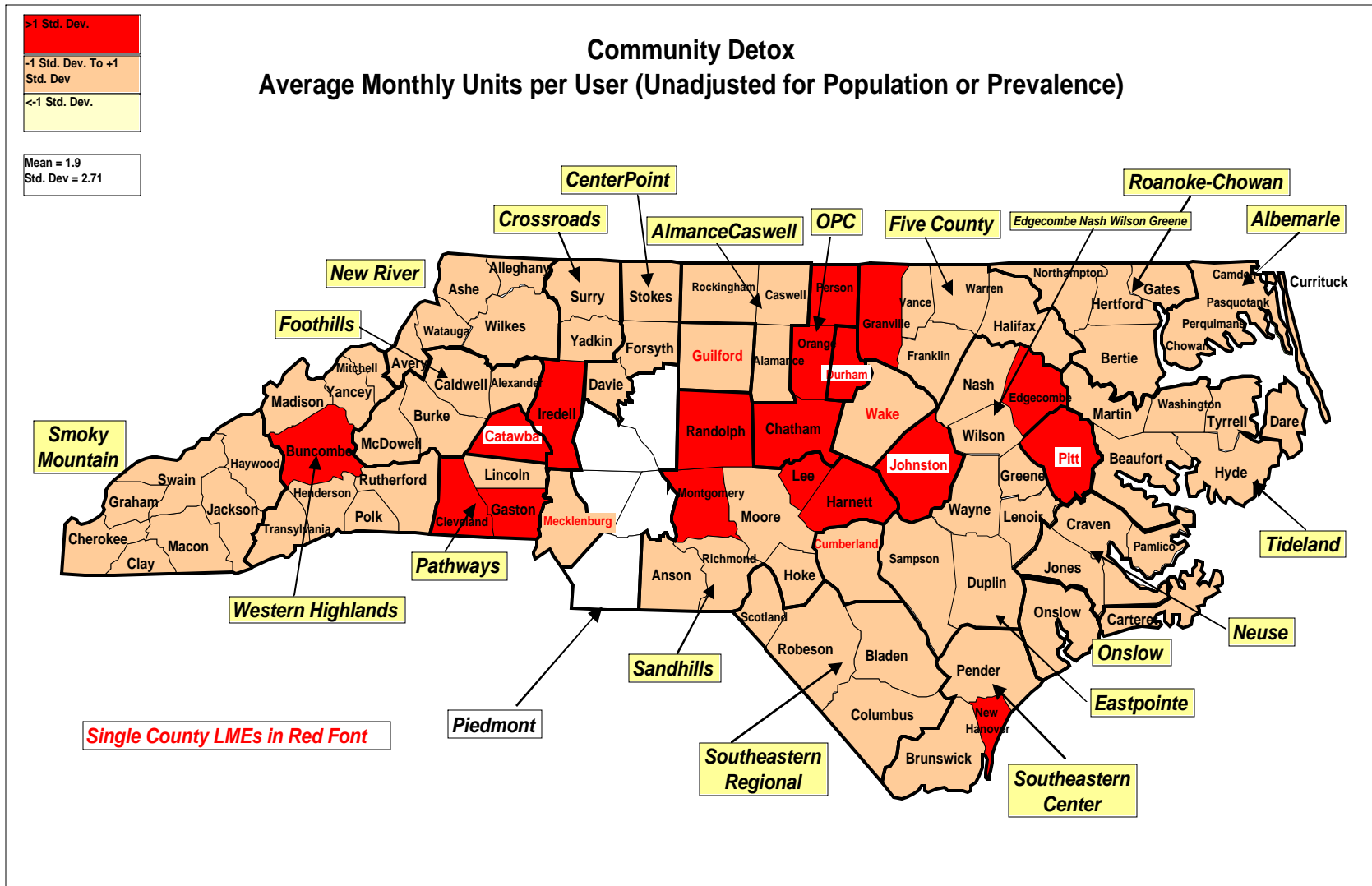


Exhibit 21



Community Inpatient

Exhibits 22 and 23 show the persons served as a percentage of total YAE prevalence and average monthly units per user not adjusted for population or prevalence for community inpatient. The mean is 1.5%. States that use community inpatient to avoid state hospitalization have about the same levels of persons served, but the average length of stay is longer than that provided in NC at about 10-15 days on average versus the 7.8 days in NC.

Selected areas of the state appear to have more ready access to community inpatient, although this is not the case in Durham and Wake where there are psychiatric inpatient facilities available. Tyrell is the only county with no Community Inpatient that is above the mean on State Facility Days. One might conclude that the presence of a Community Inpatient program may not be a factor in NC in reducing state hospital admissions. There were eleven counties with no or limited access to community inpatient care.

Local inpatient hospitals and LME Crisis programs are sending people to State Facilities. Community Inpatient programs served primarily persons with Medicaid, but paid for services for 1,572 non-Medicaid consumers. This report is based on paid claims and does not account for the indigent persons served with no state payment. Division staffs believe the number of non-Medicaid persons served may be higher in the SFY 2006 data. The programs however provided .79 units per month per consumer (less than one day). Certainly if the programs were operating within the standards of EBP this constitutes a length of stay that has no hope for success. It is most likely that the greatest numbers of programs are immediately referring people to State Facilities and that one or two programs are actually providing care for a reasonable time period.

The critical issues with Community Inpatient include:

- Other States have used Community Inpatient Programs successfully to reduce State Facility admissions and to provide people treatment as close to their supports, home and family as possible. If a single entity were charged with utilization management of admissions and purchasing those admissions from dollars not used in an admission to a State Facility, the days of care necessary would be less than in State Facilities and the dollars would be adequate to pay hospitals a reasonable, but discounted, fee.
- The State needs to encourage partnerships with local hospitals
- The State needs to set a reasonable community inpatient rate
- The State should monitor readmission rates to determine of the length of stay was appropriate to prevent relapse

Exhibit 22

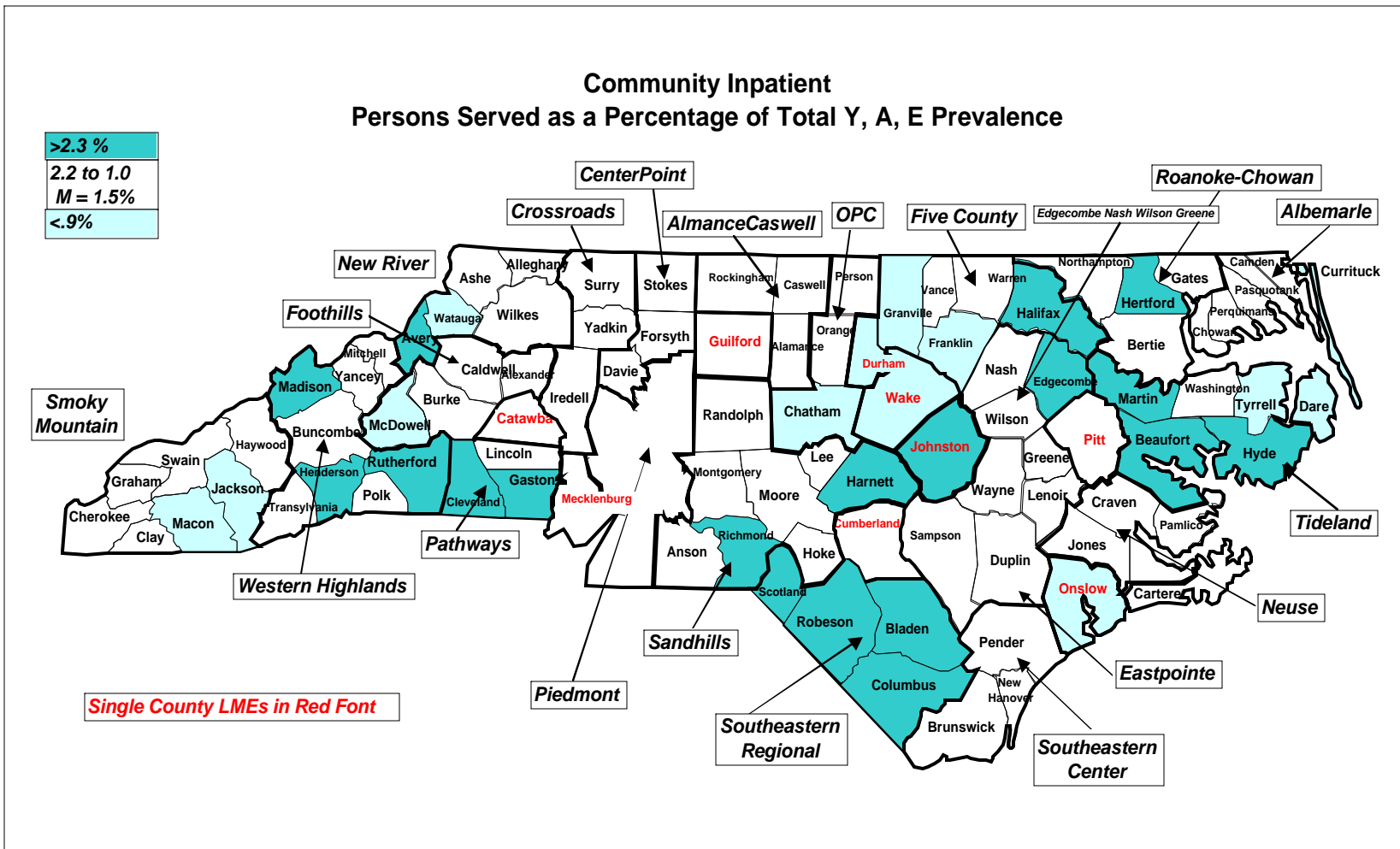
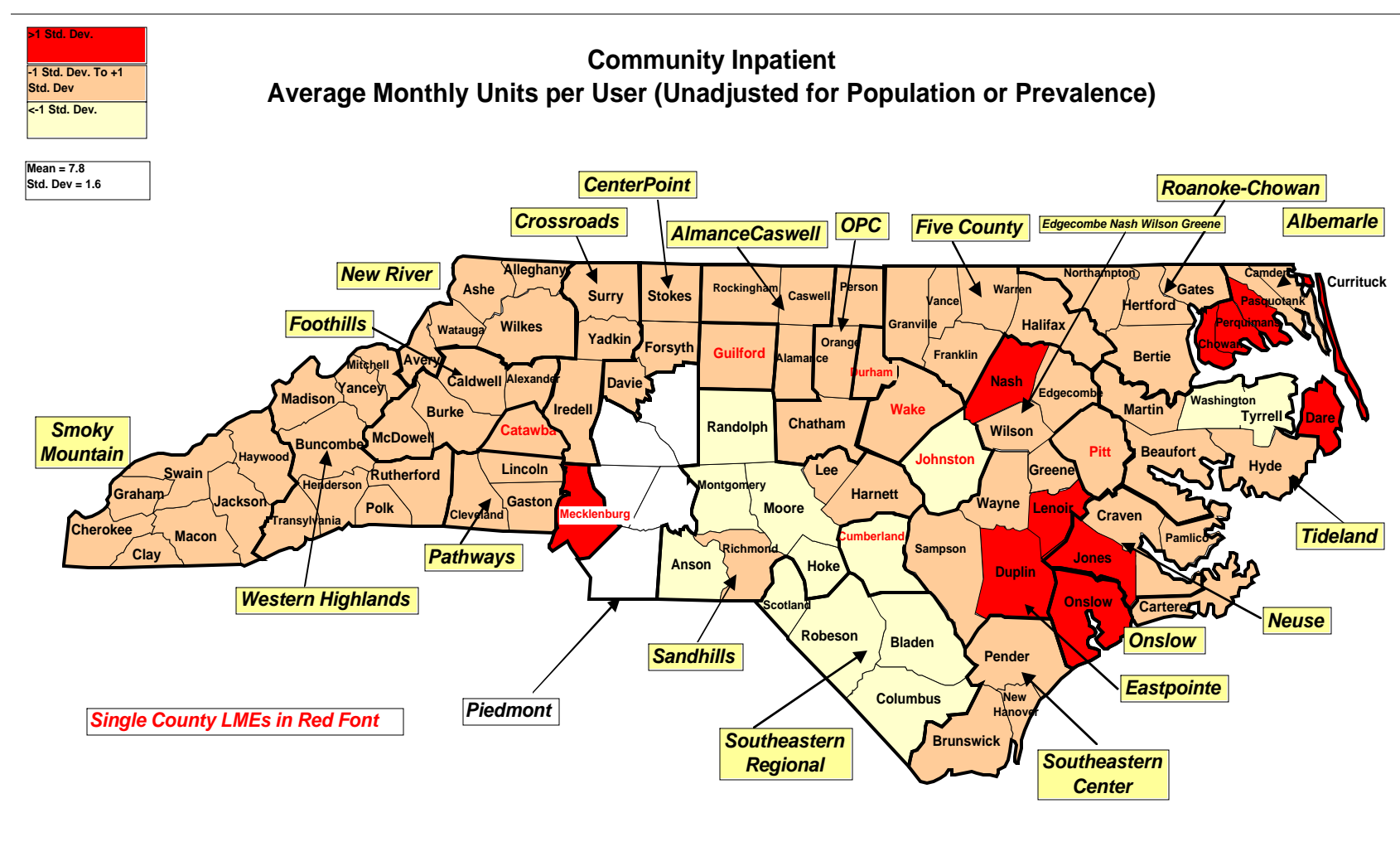


Exhibit 23



Drop In

Exhibits 24 and 25 show persons served as a percentage of total YAE prevalence and average monthly units per user not adjusted for population or prevalence for Drop-In services. Only two LMEs (Wake and Neuse) effectively have a drop-in program. The average number of units is 4.1 per month with a standard deviation of 19.88. We suspect that areas may be reporting drop-in units that are minimal and pulling down the average units for the two existing programs. Based on our experiences in the State, we know that other LMEs are operating drop-in services with local funding.

The annual cost for the programs was \$415,895. Data indicates 57 consumers were served for the year with an average 11.75 units each month. This is a cost of \$7,296 per consumer served. Clearly the LMEs are not (or are not required to) report all cases and units. The State needs to require reporting of service units and consumers on all programs the public purchases. This is however a start in the right direction toward a Recovery philosophy that uses peer supports and should be replicated around the State. The best practice recommendation is to contract through the LMEs with consumer groups to operate the Drop-In programs. The cost per consumer, however, is inordinately high.

It may be in the State's best interest given a lack of data to review these programs and consider using them to emulate an appropriate EBP that can be replicated elsewhere in the State through consumers training other consumers in the operation and philosophy of a Drop-In Center. These can also be run in small rural communities with sponsors and are a powerful mechanism to encourage peer support. The caution is that such programs should never be used to replace necessary treatment.

Drop in programs provide an avenue for developing meaningful relationships and peer supports. Drop-In programs by increasing peer supports reduce the need for more intensive services and this data, although not a large data base, may support this opinion.

Critical issues for Drop In include:

- Expand the use of Drop In programs
- Ensure programs are peer operated
- The State should require reporting of all service data from the public LME whether or not the funds are state funds to get an adequate picture of the system's capacity and effectiveness
- The current cost per person for the service needs to be reduced dramatically
- There needs to be a mechanism to train consumers in the operation of such programs and create a statewide support system for peer operated services.

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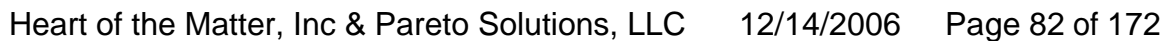
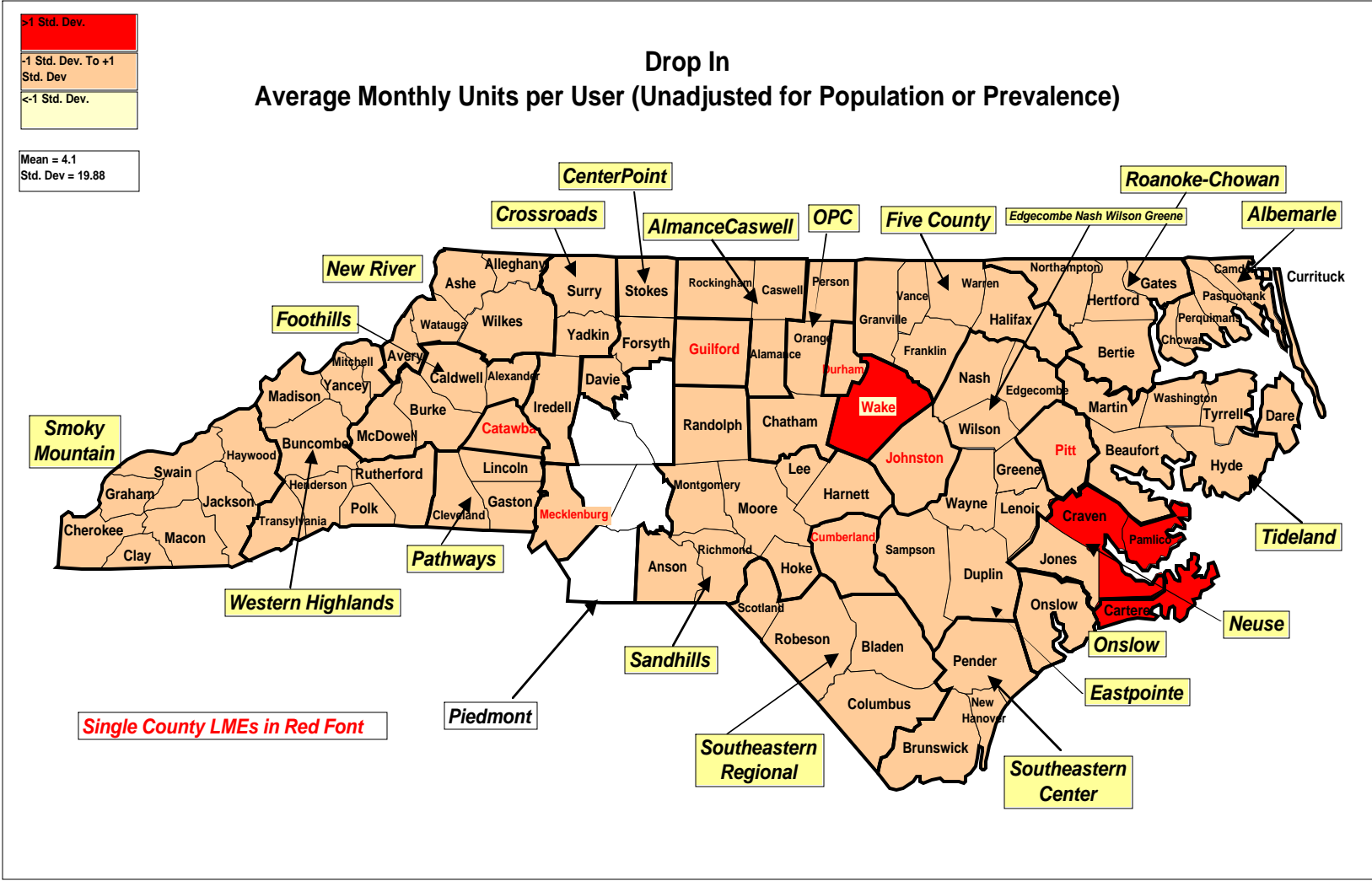


Exhibit 25



Facility Based Crisis

Exhibits 26 and 27 are pictures of persons served as a percentage of total YAE prevalence and average monthly units per user not adjusted for population or prevalence for Facility Based Crisis services. It appears from the concentrated areas of service that these are relatively strong programs in Smoky Mountain, Western Highlands, Pathways, New River and Foothills in the West (although Pathways is the only LME covering all counties in its area). Roanoke-Chowan, Tideland, Onslow and New Hanover have programs in the East. Durham and Cumberland are the strong program centers in the central area of the state.

The array and amount of crisis services throughout the state are generally not adequate to meet the needs of most communities and most individuals in the eligible populations. Crisis services often involve police, hospital emergency rooms, and high intensity service interventions. While LMEs are required to provide crisis services, there are no particular requirements or incentives for establishing mobile crisis teams, in-home crisis respite, or Facility Based Crisis. Responsible providers are required to provide crisis services for those they serve. The advantages reported for such programs include improved access to treatment, the capability to avert a crisis or decrease its severity, and reduced criminalization of persons with mental illness by diverting them from jail to treatment. Mobile crisis programs are also believed to be a cost-effective service delivery strategy for reducing the costs of psychiatric hospitalization, family burden, and the costs to the criminal justice system by providing professional assessment and crisis intervention where the consumer is.

Facility Based Crisis Programs served 6225 people in the year with an average of .64 units per month per consumer. Facility Based Crisis cost \$10,936,720 in 2005 a cost of \$1,756 per person served. In addition the State spent \$6,592,539 on "Disaster Emergency Services" as a grant to LMEs. There are no data available on numbers served or units of service for that program because entering one person pulled down the entire allocation on a monthly basis. Obviously the State needs to change methods of reporting and require emergency service data.

There is currently no systemic way statewide for LMEs or other primary service providers to know when persons in their care enter into a crisis state or emergency services setting. Communication among hospital emergency rooms and other crisis intervention providers is variable, depending on the community resources and the leaders of the respective service providers and agencies. In some areas, adults and people are ending up in the state hospital, intensive residential settings, local jails, or other high cost, high intensity settings when they could be diverted or served more effectively in less intensive ways and connected or reconnected more quickly to on-going community-based care.

There are few jail diversion projects or services that work to keep adults or children out of correctional institutions at the local level. To the extent that services are available for these populations, they are focused on services while in adult jail or juvenile corrections

facilities or while they are in the court process. Both pre-and post-booking diversion for adults and coordinated efforts to get juvenile offenders out of juvenile justice settings and back into supportive services to the child/adolescent and the family are necessary. Mobile Crisis services do not appear to be provided.

Critical Issues for Facility Based Crisis include:

- The State needs to change methods of reporting and require emergency service data on all encounters
- Expand services based on the recommendations below to adequately meet the needs of most communities and most individuals in them.
- Provide jail diversion programs, particularly pre-booking.
- Improve communication among hospital emergency rooms and other crisis intervention providers
- Establish the authority with LMEs for the State hospital front door
- Insist that programs are developed to provide intervention close to where the consumer resides through the use of mobile programs or integrated services in non urban areas.
- Provide sufficient funding for mobile services.

Exhibit 26

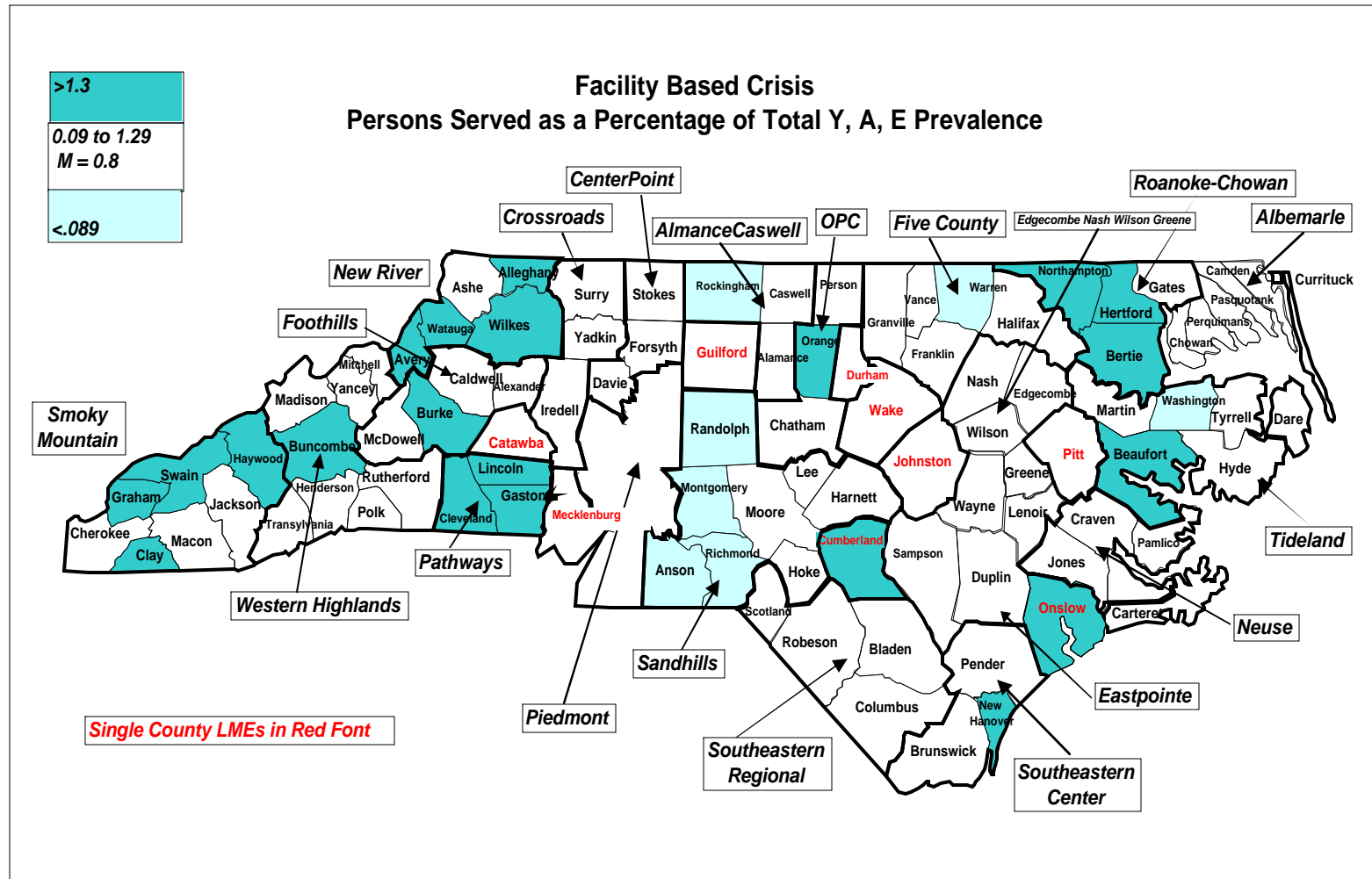
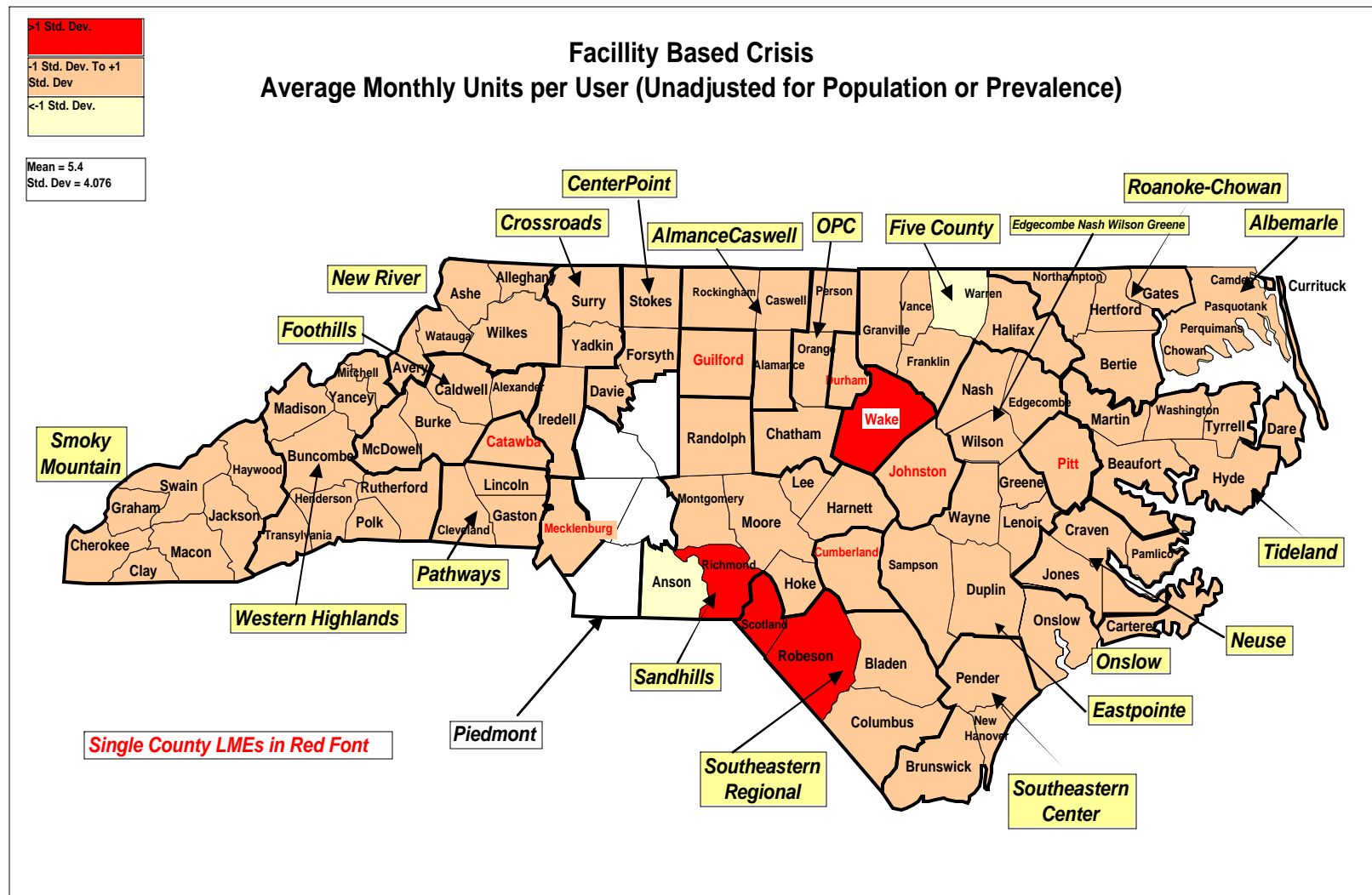


Exhibit 27



Nationally there are a number of options for crisis services. Facility Based Crisis programs cost about \$3,177,776 to operate and must have a base of at least 400,000 population to be successful and cost efficient. Mobile teams cost \$1,195,278 and programs that are integrated with healthcare or local corrections cost about \$688,300. Another way of looking at cost is to examine cost per case. Where Facility Based care is required the costs are approximately \$1,963 per consumer.

While the State is invested in implementing Facility Based Crisis Centers, given the rural population in NC, these Centers will not be economically feasible except in urban areas. In addition, because Facility Based Crisis and all Crisis programs are 24 hour/365 operations, they are very expensive to operate. One method for implementing Facility Based Crisis Statewide is to start with the counties colored Red on Exhibit 29 below. These are large populations with high density of population and could support a Facility Based Crisis Unit with a Detoxification center. Further implementation should consider the population and density of population. Those LMEs that are a textured light cream color will likely not be successful with a Facility Based Program simply because the population lacks the density to make it feasible. They would be able to sustain a Mobile Crisis Team and a residential setting for up to 6 beds for Detoxification and Crisis Stabilization. The areas that are green are both low population and low density. These areas will not support a mobile program without partnering with another area.

There are several options including training community first responders as they are doing in North Dakota. The "mental health first aid program" developed through a grant over the next three years will be the first of its kind in the nation. It is similar to basic first aid courses and helps people learn how to provide initial support to those showing signs of mental health problems or in a mental health crisis until appropriate professional treatment is received.

The other option is to integrate services with primary healthcare. Emergency department managers in a random sample of 422 Critical Access Hospitals (CAHs) in 2004 responded to questions about prevalence of mental health problems in their ER and what options they had for responding to such problems. On average, CAHs had 99 emergency room visits per week. Of these visits, 9.4% were mental health related. Thirty percent of mental health visits involved mental health as a primary diagnosis, while for the remaining 70% a mental health problem was secondary to their reason for visiting the ER. Nearly half (43%) of CAH ER reported access to crisis intervention services, a specialty mental health provider or a CMHC, but few have medical detoxification or inpatient psychiatric services in their local communities. Without these services, many CAHs are forced to transfer patients to facilities outside the community, with mean travel times averaging one hour for both services. This lack of community-based services has the potential to put further strain on mental health consumers and their families. Working with a local 24 hour healthcare provider to place a mental health worker at an urgent care clinic or a CAH is much less expensive than operating the service independently and provides a better service for the consumer who is also less

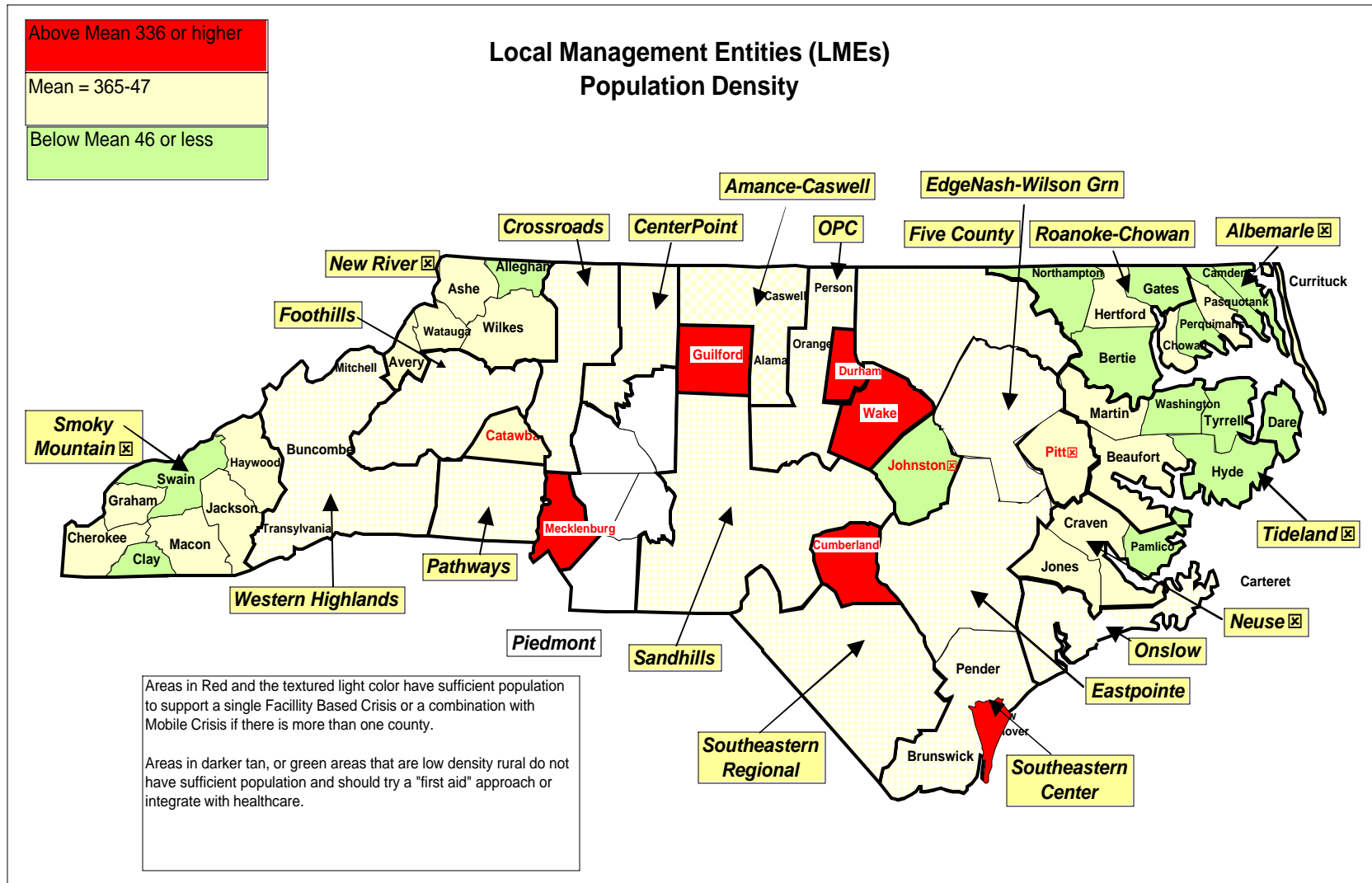
likely to be hospitalized and more likely to be connected with a less intensive array of services available through the LME. Integrated models cost about \$688,300.

Given this scenario, the following implementation is recommended:

Exhibit 28

Implementation of Crisis Capacity		
Durham	Facility Based	3,177,776
Wake	Facility Based	3,177,776
Guilford	Facility Based	3,177,776
Mecklenburg	Facility Based	3,177,776
Cumberland	Facility Based	3,177,776
South Eastern Center	Facility Based	3,177,776
Western Highlands	Mobile	1,195,278
Pathways	Mobile	1,195,278
Foothills	Mobile	1,195,278
Crossroads	Mobile	1,195,278
Centerpoint	Mobile	1,195,278
Almance Caswell	Mobile	1,195,278
OPC	Mobile	1,195,278
Sandhills	Mobile	1,195,278
South Eastern Regional	Mobile	1,195,278
Eastpointe	Mobile	1,195,278
Five County	Mobile	1,195,278
EdgecombeNash-Wilson Greene	Mobile	1,195,278
Onslow	Mobile	1,195,278
Smoky Mountain	Integrated	688,300
New River	Integrated	688,300
Catawba	Integrated	688,300
Pitt	Integrated	688,300
Roanoke Chowan	Integrated	688,300
Albemarle	Integrated	688,300
Tidelands	Integrated	688,300
Neuse	Integrated	688,300
		40,111,670

Exhibit 29



Psychosocial Rehabilitation

Exhibits 30 and 31 map persons served as a percentage of total Youth, Adult, Elderly (YAE) prevalence and average monthly units per user not adjusted for population or prevalence for PSR. A community-based psychosocial rehabilitation program is one in which the members are engaged in operating all aspects of the program, including food service, clerical, reception, janitorial and other member supports and services such as employment, housing and education. In addition, members participate in the day to-day decision-making and governance of the program and plan community projects and social activities. It is not a Day Program and requires a very low staffing level to insure member participation and management. All members have access to the services/supports and resources with no differentiation based on diagnosis or level of functioning. Members establish their own schedule of attendance and choose a unit of the program in which they will regularly participate. Members are actively engaged and supported on a regular basis by staff in the activities and tasks that they have chosen. Membership in the program and access to supportive services reflects the member's preferences and needs. Staff and members work side-by-side to generate and accomplish individual/team tasks and activities necessary for the development, support, and maintenance of the program. Members have access to the clubhouse during times other than the ordered day, including evenings, weekends, and/or holidays. Member participation in the ordered day provides experiences that will support members' recovery, and is designed to assist members to acquire personal, community and social competencies and to establish and navigate environmental support systems.

In NC there are only 4 LMEs that had no PSR Units to report. There are 11 counties above the statewide mean of 0.4% for persons. Service Data analysis tells us that 3,524 persons were served with about 6 hours per day per person. That is an adequate intensity level that would promote recovery but it needs to be provided to more cases. Again, this is a model where the State should monitor fidelity and establish outcomes for performance related to employment, housing and ability to use community resources as well as reductions in state facility days

Critical issues for PSR include:

- Expanding the service to other counties to promote recovery and employment
- Assuring Model Fidelity so that PSR does not become another day program
- Encourage consumer participation and governance

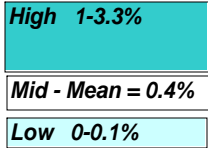
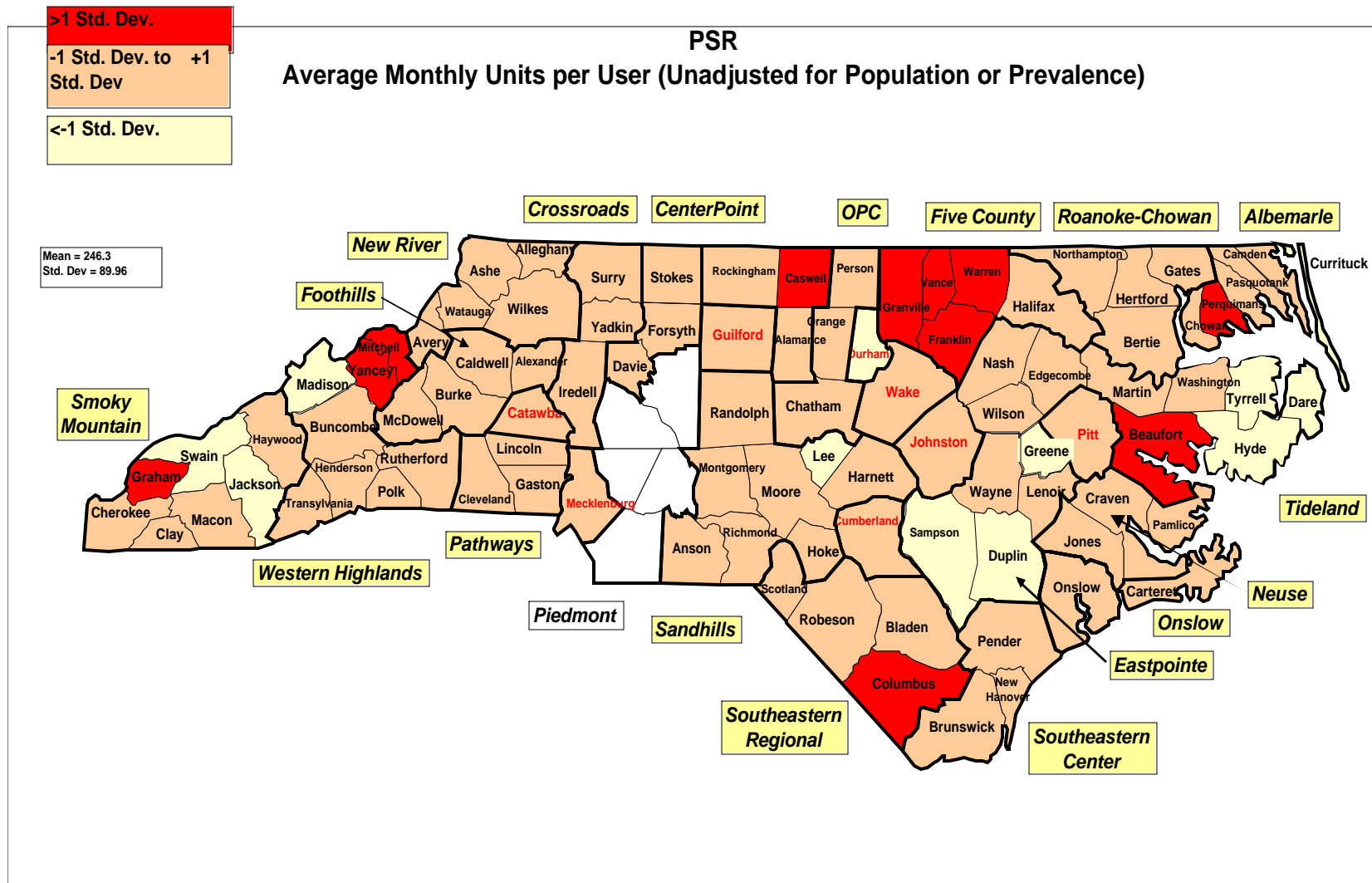


Exhibit 31



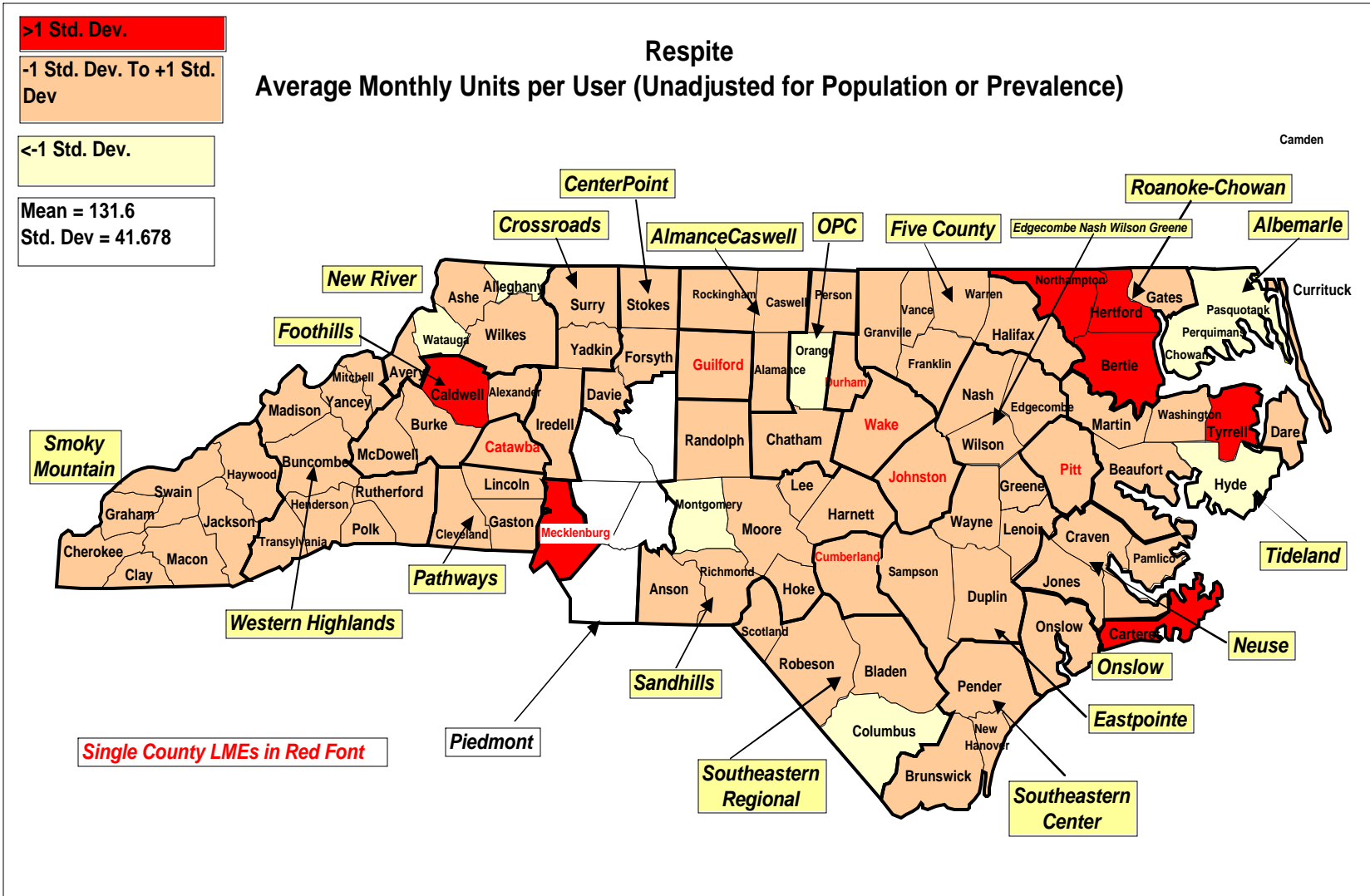
Respite Care

Respite care is being provided at high levels for persons with Developmental Disabilities: 4,900 persons with DD versus 499 children with SED. The Medicaid Waiver pays for respite care for persons with developmental disabilities. Respite for children with SED or SA problems is purchased with 100% state funding. Exhibit 32 shows the average monthly units per user unadjusted for population and prevalence.

Critical issues for Respite include:

- It is important to implement more respite care for children with SA and children with SED to help them stay in the family home and avoid residential placements.

Exhibit 32



Supported Employment

Exhibits 33 and 34 provide a snapshot of supported employment in NC through mapping of persons served as a percentage of total YAE prevalence and average monthly units per user not adjusted for population or prevalence. There are isolated programs providing service. The mean is only 0.5%. To be effective supported employment requires a higher level of service and support. The state reports it has agreements with vocational rehabilitation services to provide job finding and placement services with LMEs providing follow along service. Overall supported employment is lacking throughout the State.

Research has shown that 70% of adults with mental illness desire to work and 60% can be successful at working when using supported employment. In 2005 3,707 persons with DD received an average of 2 units a month of supported employment. 741 persons with SMI were served with only 0.49 units per person per month. This service intensity is not adequate to accomplish the goals of supported employment.

The United States Department of Health and Human Services Administration, Center for Mental Health Services recognizes six practices as Evidence Based Practices (EBP) that promote recovery; Supported Employment is one of those practices. Research has suggested that even people who are assumed unlikely to succeed in employment can improve their employment outcomes with the help of supported employment. When an agency develops a culture of work and encourages people to consider employment options, the number of people who go to work increases. Currently, some of the elements of supported employment have more supporting evidence than others. The following components are predictive of better employment outcomes:

- Focus on competitive employment
- Rapid job searches
- Jobs tailored to individuals
- Time-unlimited follow-along supports
- Integration of supported employment and mental health services
- Zero exclusion criteria (that is, no one is screened out because they are not ready)

The term “supported employment” includes small business enterprise, work crews, enclaves within industry, and individualized job placements. Supported employment has a goal of developing independent work skills leading to competitive wages for individuals. The 1984 Developmental Disabilities Act Amendments helped establish employment services for individuals with MR/DD as a national priority. The percentage of day and work recipients with MR/DD who participated in supported employment more than doubled between 1988 and 1993. Between 1993 and 2002, the supported employment percentage continued to grow, but at a substantially slower rate. Supported employment spending also grew modestly during 2000- 2002, from \$612 million to \$663 million, a 3% inflation-adjusted increase. In 2002, 24% of all vocational and day program participants in the U.S. worked in supported or competitive employment, while the remaining 76% of participants received services in sheltered employment, day

activity, or day habilitation programs. The proportion of total day-work participants who worked in supported or competitive employment services in 2002 ranged from less than 10% in Alabama, Arkansas, the District of Columbia, and West Virginia to 40% or more in Alaska, Connecticut, Massachusetts, Oklahoma, Pennsylvania, Utah, Vermont, and Washington. In 2002, supported employment spending per capita of the state general population ranged from \$0.01 in Arkansas to over \$10.00 in Connecticut and Massachusetts; the national average was \$2.30.

Loss of SSI and associated Medicaid health care benefits constitutes a barrier to employment of persons with all disabilities. The two most recent pieces of legislation aimed at improving work opportunities for all people with disabilities were the Balanced Budget Act (BBA) of 1997 and the Ticket to Work and Work Incentives Improvement Act (TWWIIA), enacted in 1999. Both acts were designed to address the barriers to work that people with disabilities confront as a result of the potential loss of publicly funded health care services when they become employed. Section 4733 of the Balanced Budget Act allows states to provide Medicaid eligibility to workers with disabilities. The individuals may not exceed 250% of the federal poverty level and their resources must not exceed the SSI resource standard. Under Section 4733, there is no definition of an "employed individual" and no minimum hours of work are required. As of June 2002, Alaska, California, Iowa, Maine, Mississippi, Nebraska, New Mexico, Vermont, and Wisconsin were participating in this program. The Ticket to Work and Work Incentives Improvement Act provided \$150 million in grants to the states so that workers with disabilities who return to work could continue to receive coverage through a Medicaid buy-in. These provisions allowed higher income beneficiaries to pay premiums, or in essence, to buy into the Medicaid program. States were not required to participate in this optional work incentives program.

There are two eligibility groups under the TWWIIA, the basic coverage group and the medical improvement group. Currently, Arizona, Arkansas, Connecticut, Florida, Illinois, Indiana, Kansas, Minnesota, Missouri, New Hampshire, New Jersey, Washington, and Wyoming have implemented the basic coverage option. The medical improvement group is aimed at individuals with cyclical or periodic disabilities. In this eligibility group, an employed individual is "a person who is earning at least the federal minimum wage and is working at least 40 hours a month, or is engaged in a work effort that meets an alternate definition as defined by the state and approved by the federal government. Currently Connecticut, Indiana, and Missouri participate in this option. In addition to establishing new coverage options, the TWWIIA also created a Medicaid Infrastructure Grant Program and Medicaid demonstration projects that provided \$150 million in grants to the states so that workers with disabilities who return to work could continue to receive Medicaid. As of April 2003, thirty-eight states and the District of Columbia were participating in demonstration and infrastructure grant activities. By the end of 2002, over 24,000 individuals with disabilities had enrolled in the TWWIIA Medicaid Buy-In.

We did not have data from NC reporting numbers of people employed competitively or the number of hours worked. Various reasons are given for why individuals are not offered supported employment services including a lack of transportation.

Transportation is a problem in SE programs across the nation, but there are methods to achieve success that need to be explored.

NC does not deploy sufficient emphasis and resources into Supported Employment services for individuals with developmental disabilities or persons with mental illness.

Critical issues for Supported Employment include:

- A higher level of service and support in existing programs
- A written policy on the agreement with Vocational Rehabilitation and the principles to be followed in working with select disabilities
- Increase supported employment throughout the State
- Collect data reporting numbers of people employed competitively or the number of hours worked.
- Assist LMEs with technical issues related to Transportation to work

Exhibit 33

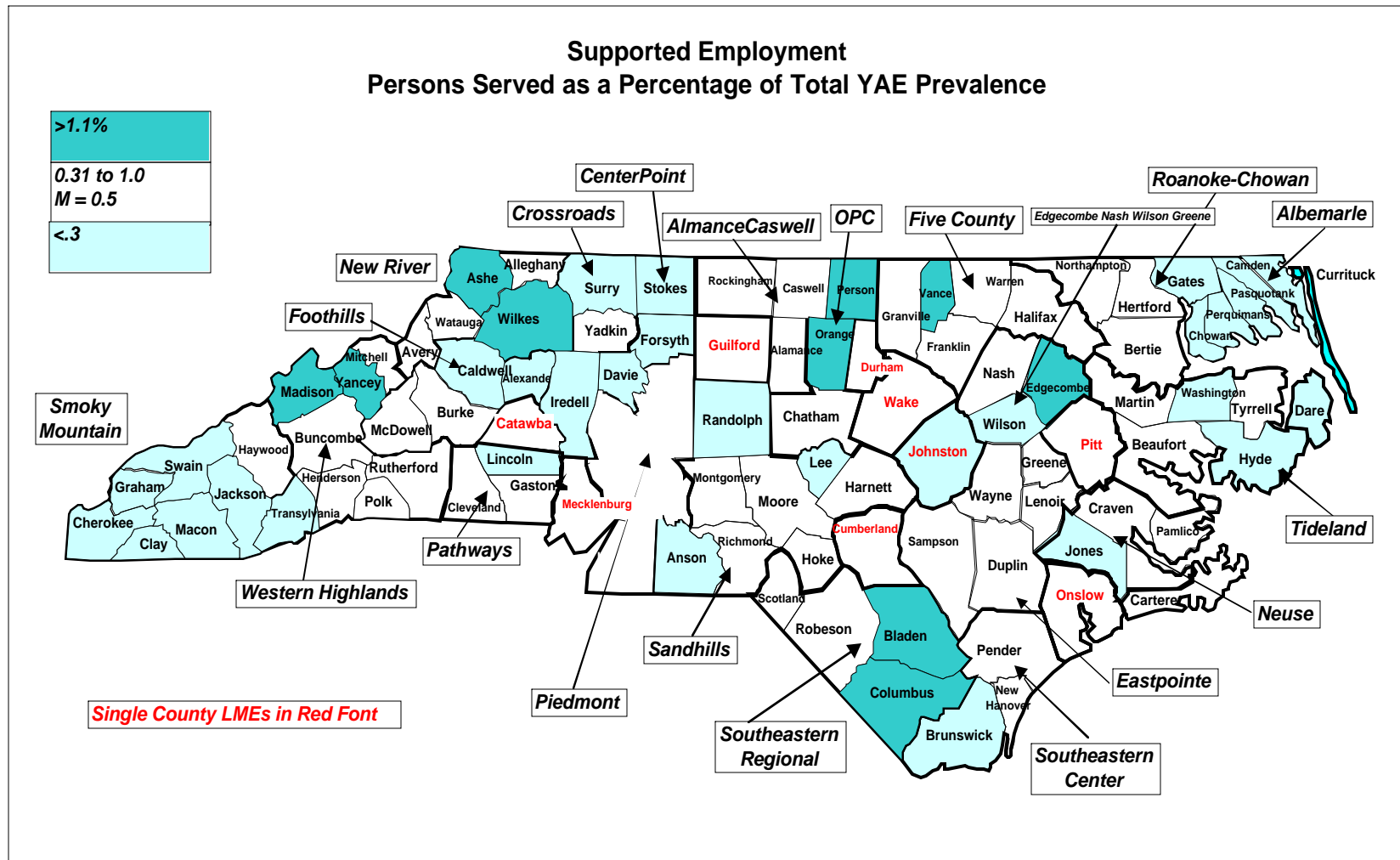
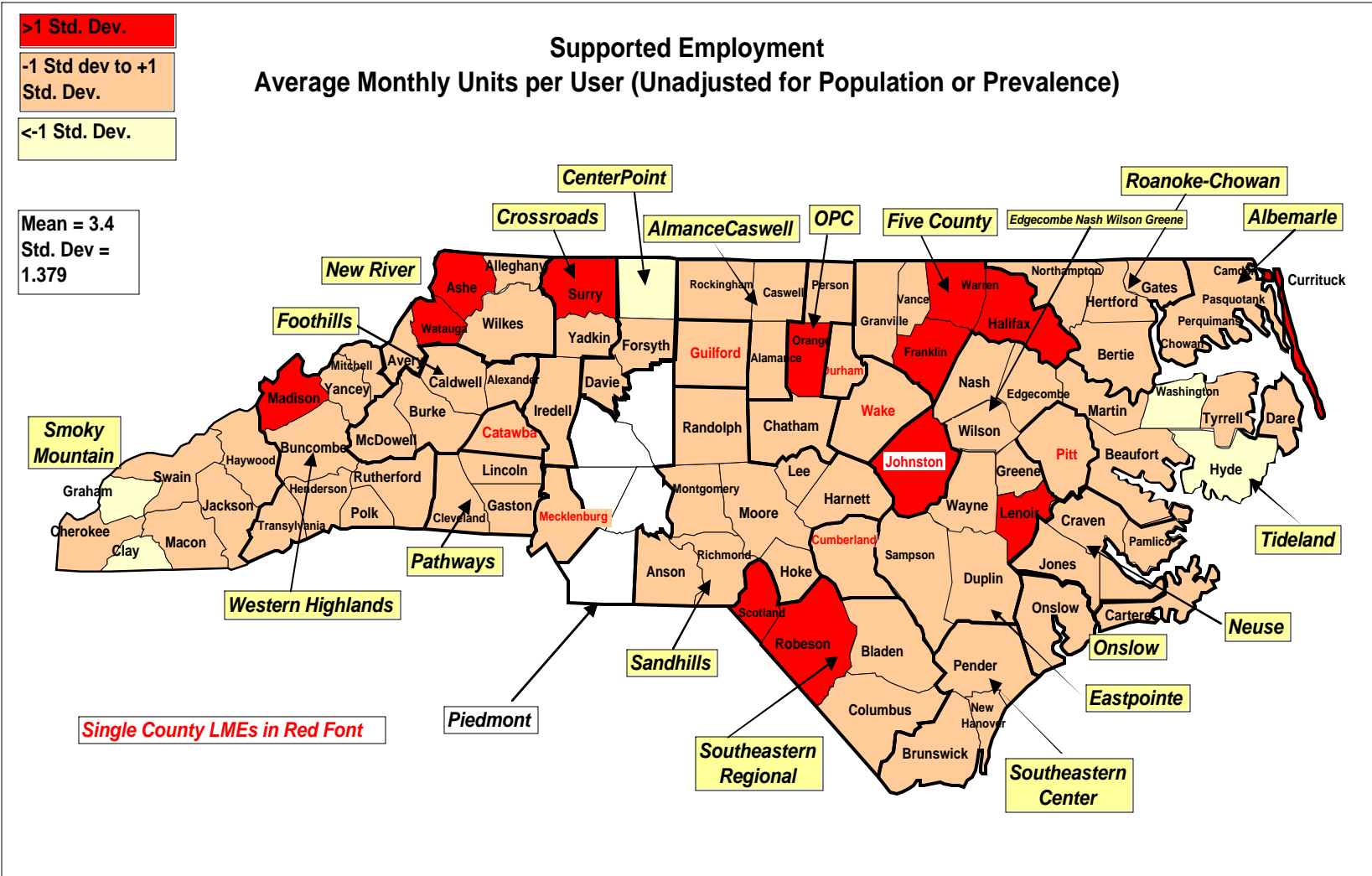


Exhibit 34



Other Recovery Service Programs or Evidence Based Practices

Housing and supportive living arrangements for adults are not widely available throughout NC. Supported apartments are either not available or are in insufficient numbers except in a few geographic areas. For the 39 States that reported data in the Housing Domain, 75 percent of the mental health consumers were living in private residences. NC also does not have data measures for this variable. National costs are averaging 200,000 for 52 slots or \$3,846 per individual.

Because the State recently implemented Intensive In-Home, Multi Systemic Therapy (MST), Comprehensive Outpatient, Community Support and Community Support Teams data were not available for the type of analyses performed in this report.

We have discussed the implementation of various other EBP with the State Division leadership and have reached consensus to incorporate them in the simulation Model we have developed. Most of the practices can be integrated in existing billable services: Day Care Integration Model 3-6 years, Family Psycho-education, Family Support, Illness Management & Recovery, as well as Integrated Treatment for Dual Disorders, Parent Management Training, and Self-Directed Supports. Additional costs are added in the Model to support the additional units of service that will be needed when these best practices are integrated. We recognize there is no separate billing code, but needed to address the cost of requiring additional supports. Indicated & Selective Prevention Services for children in community settings will require additional funding but is critical to reducing Substance use in children and adolescents. Certainly the State needs to fund consumer owned and operated peer support services. Those services are recognized in the Model through a global allocation.

All of these services are incorporated in the EBP Model Tool developed for the State that provides a template for adjusting persons, units and cost to arrive at projections using new practices on an annual or more frequent basis. The results of Model Simulations are described in Chapter V.

State Hospitals

Data being used by Division staff shows that Wake County was the 4th highest “utilizer” (per capita) of State Hospitals and Mecklenberg was one of the lowest. This discrepancy results from not adjusting for annual days per 1000 and unduplicated annual cases per 1000 for population.

In examining days of care, it is evident that hospital costs could be reduced significantly by lowering the length of stay through appropriate discharge planning. NC’s statewide hospital average length of stay for adults based upon the 2004 CMHS Uniform Reporting System is:

- Discharged Adults: NC-7days US – 54 days
- Resident Adults: NC – 115 days US – 45 days

The SH admission rate is 1.26 per 1000 compared to the National average of 0.61, almost twice the national average. This information shows the acute nature of NC’s hospitals, but also demonstrates that there are some patients with much longer admissions. The cost factors are related to both acuity with high admission levels and extended stays.

The following set of Exhibits (35 and 36) is included to make contrasts and comparisons with EBP for State Psychiatric Hospitals. Data utilized is based on a final set provided by the Division in June 2006. The parties agreed to use this data set as there were multiple methods for keeping data that led to confusion when trying to present a fair picture of the State’s Facility use. We extracted the State Hospital data for youth, elderly and adult for all psychiatric state hospital use. DD facilities were not included.¹³

Exhibits 35 and 36 show psychiatric hospital days that are adjusted for population and prevalence. The following counties are one standard deviation above the mean for persons using state psychiatric hospitals: Beaufort, Buncombe, Dare, Edgecombe, Halifax, Lenoir, Martin, Nash, New Hanover, Pamlico, Pasquotank, Person, Rockingham, Sampson, Vance, Warren and Wilson

The following are counties one standard deviation below the mean: Alexander, Avery, Catawba, Columbus, Cumberland, Davie, Gates, Hoke, Johnston, Mecklenburg, Polk, and Robeson.

¹³ “Data from DMH data base was total persons and days. This is a re-running of original data, with “Responsible County” replacing “county of eligibility”, Age was calculated as of June 30, 2005. Dropped Piedmont counties: Cabarrus, Davidson, Rowan, Stanly, and Union. Also dropped unknown and out-of-state. “OTHER” was derived by subtracting Medicaid from Total Institution data, using county by age group totals for each institution group. I then “cleaned” the data to remove logical impossibilities caused by mismatches between the two data sets. E.g., if the subtraction resulted in negative days or persons, then the OTHER days and persons was set to zero. I believe these are now reasonable numbers for this project, although they will not match back exactly to existing reports.” Adam Holtzman

Exhibit 35

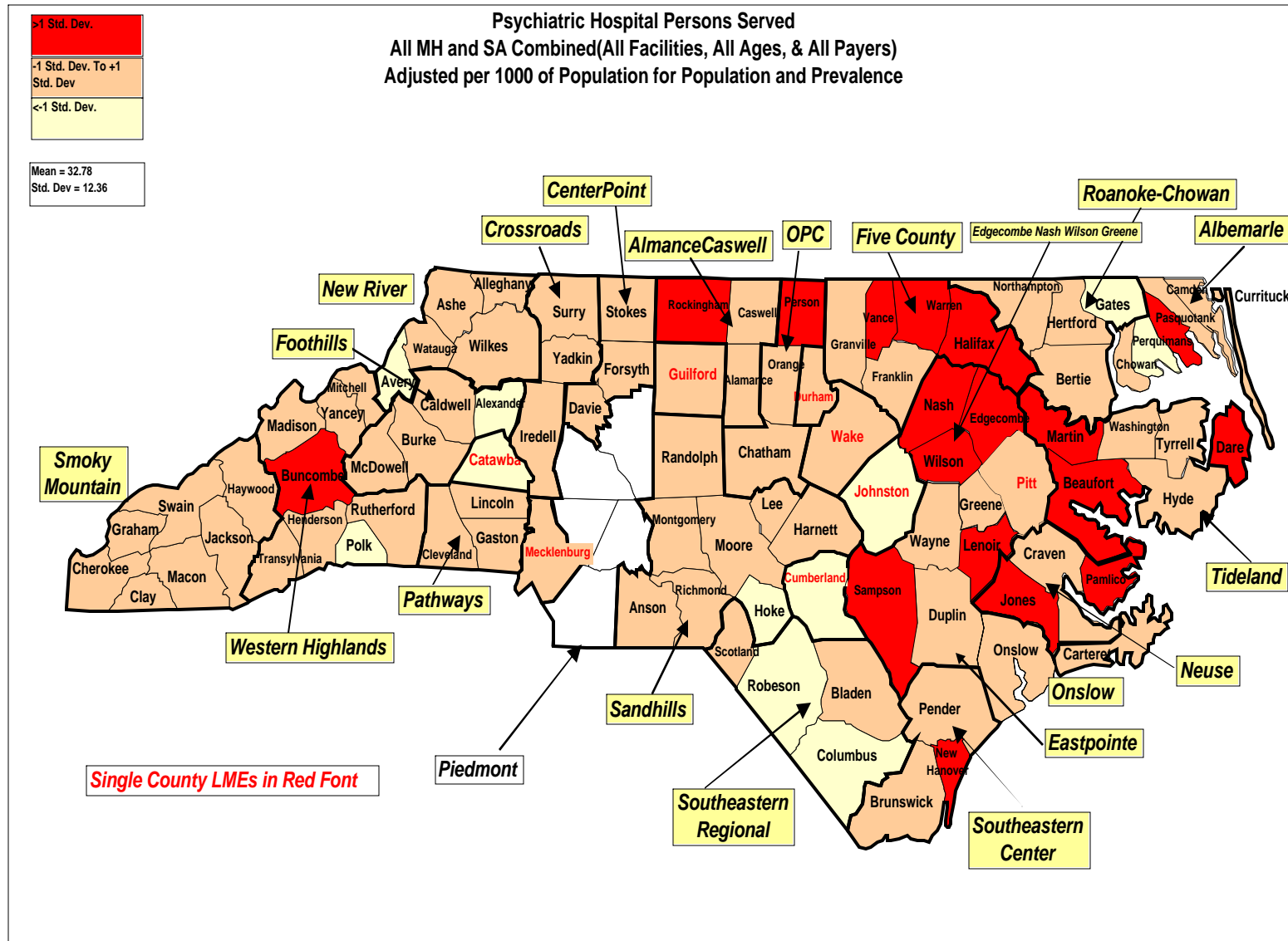
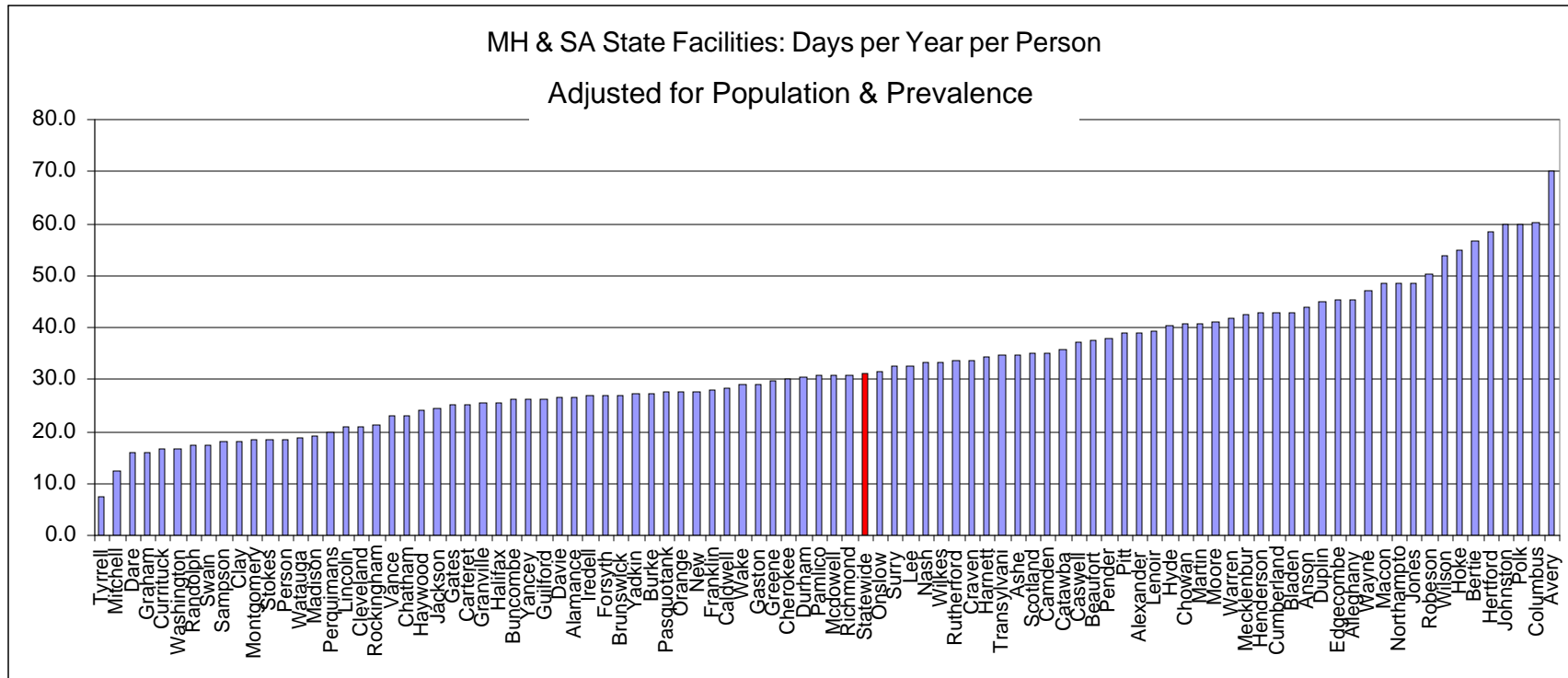


Exhibit 36

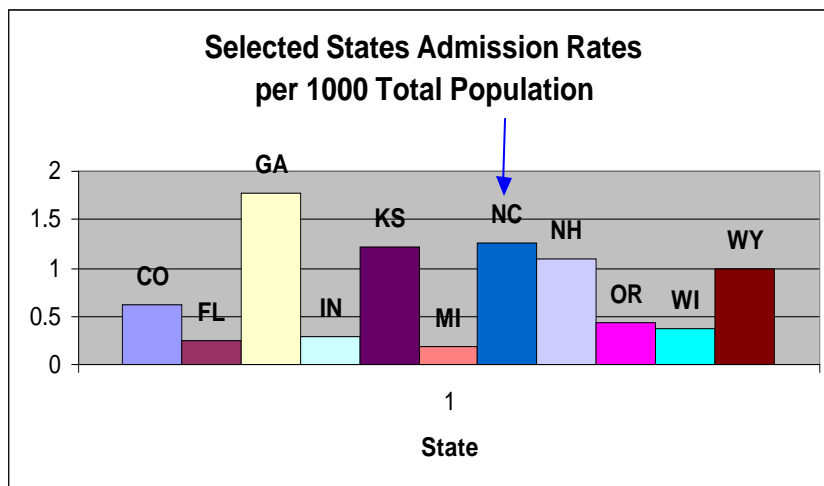


In NC, State Hospital care is often provided as a first option rather than a last resort. State Hospitals appear to fill the void of community-based crisis. For every 1,000 North Carolinians, 1.26 will receive state hospital treatment compared to the national average of 0.61 per 1000. The NC State Hospital readmission rate within 30 days was 11%. Based on our previous analyses, continuity of care supports are insufficient to ensure system effectiveness. Community Detoxification services are limited for assisting individuals with a history of substance abuse. These two factors cause increases in State Hospital use.

The State's single entry point to State Facilities is designated as the LME that cannot deny admissions that bypass their system. If NC truly wants a community based system it will have to make difficult policy decisions that are enforceable regarding the "front door" to state hospitals. This of course cannot be implemented until certain EBP are also implemented and a culture is created that responds to Model Fidelity and the principles of community care and inclusion. NC's State psychiatric hospital average annual days per 1000 population is 36.95 based on the 2005 Division data.

Exhibit 37

People without a place to go in the community and their advocates are heartened by the decision of the Supreme Court in *Olmstead v. L.C.* as a guarantee that people have a right to an appropriate place in the community. The weight of the Court's decision applies renewed pressure on state systems to provide



appropriate services to those people who meet qualifications for placement who are currently in institutions only because there is no place in the community ready to receive them. LMEs and local service providers must respond to this new, if familiar, challenge. The decision is an opportunity to take full advantage of local and state planning vehicles already in place and to ensure adherence to existing federal planning requirements. NASMHPD and its partners are developing a document providing strategies for accessing financial resources for enhancing community-based services. It will also illustrate safe and effective methods for transitioning those individuals who can be appropriately treated at the community level.

NC established in 2000 a process for reducing State Psychiatric Hospital use through bed day allocation to facilitate the movement to a per-capita allocation of bed days

among LMEs during the downsizing process. The plan was to change the bed day allocation each year in response to bed reductions and reallocate the remaining beds on a per-capita basis. Bed days were initially allocated to area programs in four service categories: adult admissions; geriatric admissions; adolescent admissions; and adult long-term care. Each area program was to be responsible for the authorization of all hospital admissions and reauthorization for continued stay at the hospital. However, the intention has had few teeth and people are admitted from variety of sources, including leaving the Hospital directors with the final word on admission status, a potential conflict of interest since continued downsizing could result in reduced funding. Implementation of the downsizing plan was meant to redirect dollars from hospital budgets to LMEs for community service capacity from Fiscal Year 2002 to Fiscal Year 2007.

There has been a disagreement between LMEs and the State regarding the number of admission beds that were in the Plan. Regardless, the elimination of hospital bed days progressed on schedule. The State from SFY 03-06 redirected \$14,195,695 in state annualized state appropriations for downsizing from psychiatric hospitals to the community. The LMEs contend the transfer of recurring funds has been significantly less than planned. Based on the actual combined utilization of the State hospitals, there has been an increase of 65% in per patient bed day cost between Fiscal Year 2001 and Fiscal Year 2005. Bed closures have not resulted in reduced State hospital budgets. Increases have been a result of legislative increases for staff salaries. This report later explains why some other cost increase per bed day may be a reasonable factor given economic increases compared to the rate of deinstitutionalization.

LMEs appear to have been successful in reducing their level of hospital usage. The downsizing plan called for a reduction of 491 beds among the four bed categories by June 30, 2005. The Division's hospital bed-day utilization report for Fiscal Year 2005 shows an actual reduction of 521 beds. The average Daily census has also gone down. The State has voiced concerns that admissions have increased during the past two fiscal years and that in fact the cost of processing an admission is significantly higher than a routine bed day. The cost of the type of bed is clearly a major factor in the disparity. LMEs contend the total number of admissions has increased but the total number of beds has actually declined by the equivalent of 54 beds during the past two fiscal years. The LMEs also contend that the NC population growth during the past four fiscal years is also a factor.

In any case, the concept of transferring funds to the community is one we support. It is critical however that those funds in fact follow the consumer or the hospital admission rate will never stabilize because of a lack of community supports. Downsizing is a difficult process. Local Management Entities should evaluate each referral to a State Hospital, regardless of the referral source, for alternative treatment options. If a hospital admits or does not discharge a patient when the LME has developed a clinically appropriate and adequate alternative to hospitalization, the LME should not be charged for those days. The local LMEs have a responsibility to institute sound crisis capacity and EBP to help people avoid institutional care.

Exhibit 38
Fiscal Year 2001 Average Daily Census

Bed Type	BROUGHTON	CHERRY	DIX	JUH	TOTAL
Adult Admissions	159	90	78	118	445
Adult Long Term	134	198	108	157	597
Geriatric Admissions	80	16	51	52	199
Medical Services	19	7	13	27	66
ICF/SNF	13	115		25	153
Child		10		18	28
Adolescent	31	16	35	35	117
TB Unit		2			2
Deaf Services Unit			10		10
Clinical Research			7		7
Pre-Trial Evaluation			23		23
Forensic Treatment			70		70
Total Census	436	454	395	432	1,717

Exhibit 39
Target Fiscal Year 2007

Bed Type	BROUGHTON	CHERRY	DIX	JUH	TOTAL
Adult Admissions	97	72	60	84	313
Adult Long Term	89	98	45	60	292
Geriatric Admissions	20	20	20	20	80
Medical Services	10	10	10	10	40
Adolescent	12	12	12	19	55
Deaf Services Unit			10		10
Clinical Research			10		10
Pre-Trial Evaluation			34		34
Forensic Treatment	50		50		100
Total Capacity	278	212	251	193	934

In implementing the EBP we have mentioned, ACTT and crisis capacity are the most critical. The State should strongly consider funding these programs or expansions in counties with state hospital rates in excess of the State average and provide technical assistance to insure models are adhered to and the culture is established. Downsizing will simply never work for state hospital use or other restrictive care like residential programs if there is not support from the management and staff that work directly with consumers. In addition the Division should continue monitoring monthly performance indicators for hospital days, readmission rates within 30 days, availability of appropriate care at discharge, etc.

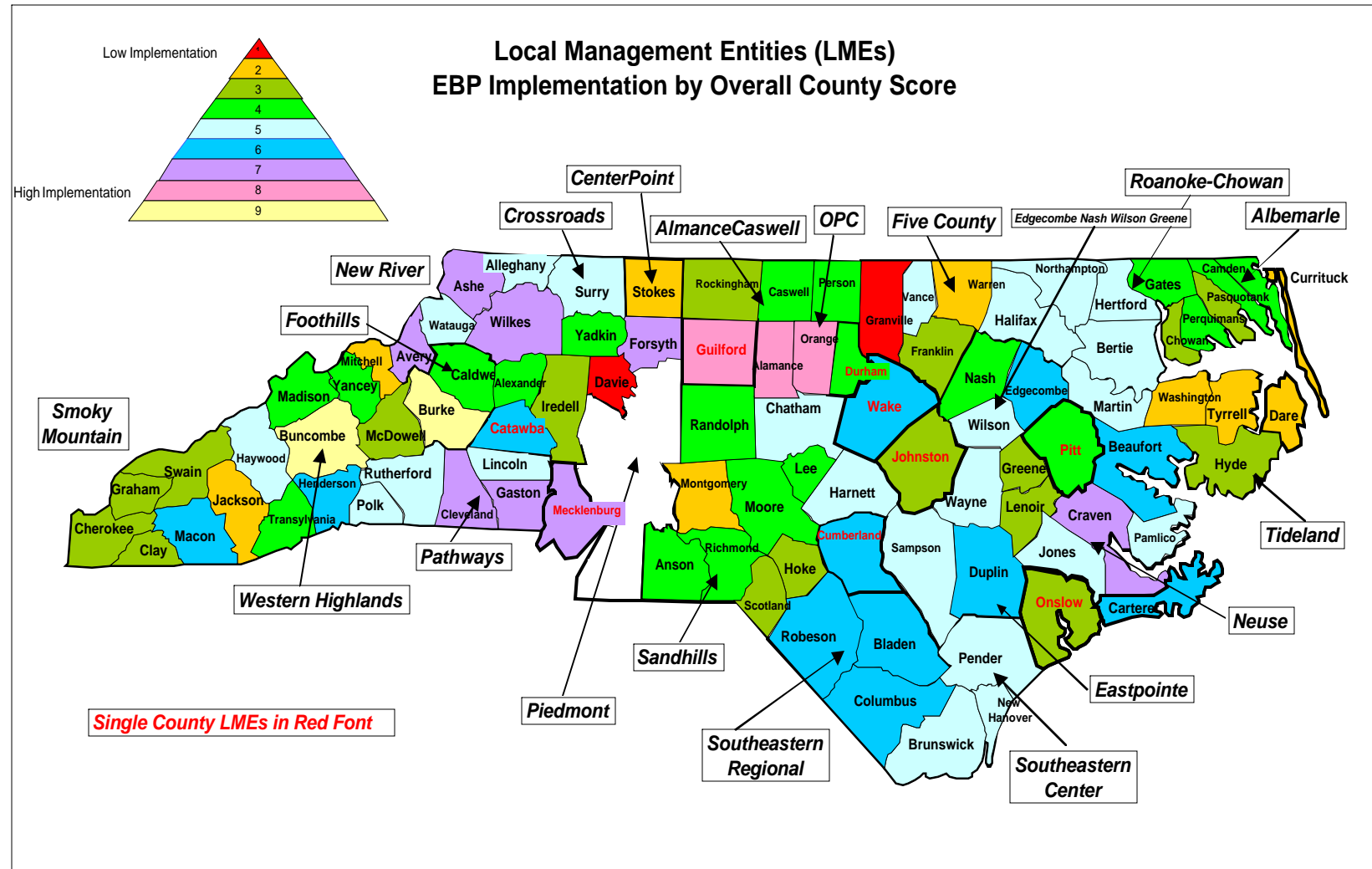
Nearly as critical are employment programs since data for all three populations demonstrates that work and housing are highly correlated with successful recovery and stability.

EBP Implementation by Overall County Score

Based upon whether a county scored above the mean, at the mean or below the mean for persons and service units for each of the best practices reviewed in this report, a score was created. A score above the mean received a score of 2 for the practice, within the mean band a score of 1 and below the mean a score of zero.

The scores were then summed for each county. It is important to remember that new service definitions were not in place to allow significant implementation during the 2005 SFY. The map could be used for purposes of filling gaps where there is relatively low implementation. Exhibit 40 is a map showing relative county scores for EBP implementation:

Exhibit 40



Utilization by Age and Race

NC Population Data has been incorporated in the EBP Model developed for the State to project growth through 2010. The population in 2010 will have 1,742,309 Children; 283,398 Youth; 5,690,939 Adults; and 1,167,894 Elderly. Note that 15 to 25 % of older adults in the United States suffer from significant symptoms of mental illness, yet the Division of MH/DD/SA provided services to only 14,949 individuals over the age of 65, comprising 5.66% of the total population served. Clinicians need to know more about this age group because the number and proportion of older adults in the population are increasing. At the height of the aging of the "baby boomers", 20 percent of the population of the United States will be 65 years old or older. The "oldest old" group (those over 85 years) is increasing faster than any other age group. The overall prevalence of mental disorders for older adults was lower than for any other age group. Only cognitive impairment shows a definite age-associated increase in incidence. The prevalence of alcohol abuse and dependence in adults 65 years of age and older range is 2–5 percent for men and 1 percent for women. There is a decline in substance abuse for adults over age 60.¹⁵

Research indicates that psychological interventions that historically have proven effective with younger and middle-aged adults are also effective for older adults. Specifically, cognitive-behavioral therapy has been shown to be effective in the treatment of one or more late-life mental disorders. Assessment and treatment must be informed by new training and education. Older people evidence fewer diagnosable psychiatric disorders than younger persons, excluding cognitive impairments. Because older adults referred for psychological treatment often have concurrent physical or social problems, coordination with other service providers is essential. Psycho-educational approaches developed particularly for family members caring for older adults with cognitive loss may be useful in helping them more successfully care for the impaired relative. Education about the nature of cognitive loss, problem-solving practical problems, and the provision of emotional support are key components of such psycho-education. For older adults experiencing significant cognitive loss, cognitive training techniques, behavior modification, and changes in the social or physical environment may lead to improved emotional health and functioning. Older adults are experiencing "Elder Abuse" at an alarming rate. Therefore any assessment must take abuse into account. Depression and anxiety are the most common disorders, often a result of medications taken for physical health reasons. The older adult population should be better represented in all programs, particularly mental health programs.

¹⁵ APA; What Practitioners Should Know About Working with older adults Professional Psychology: Research and Practice (1998), Vol. 29, No. 5, 413-427

Exhibit 41

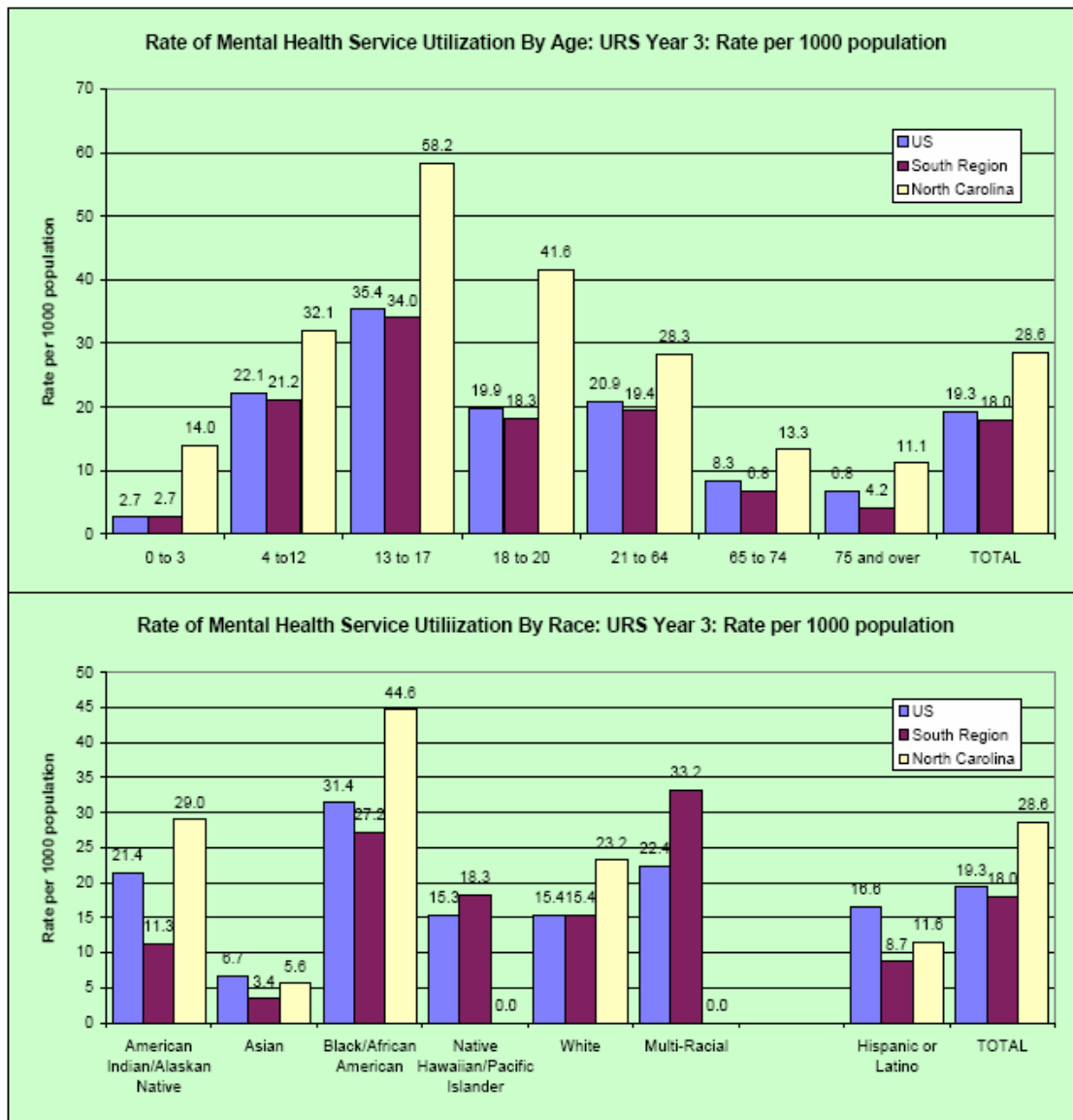
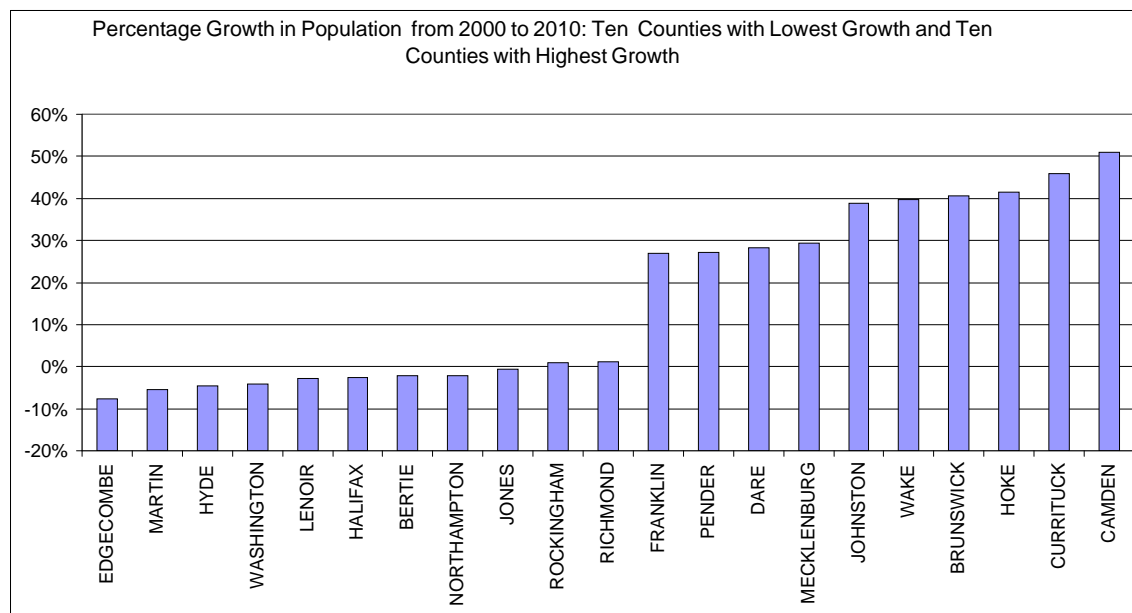


Exhibit 41 is from the 2004 CMHS Uniform Reporting System (URS) Tables 8/26/2005. The data in Exhibit 41 show that NC is above the national average and the Southern Regional average for serving the elderly. Minority Groups do not appear to be underserved as a percentage of all recipients of public services. In fact, NC ranks higher than the nation and the Southern Region in serving minority populations. However, rural populations are underserved compared to more dense population areas.

Population Growth

We calculated the population growth projected from 2000 to 2010 for each of the 94 counties in our analysis. Exhibit 42 presents the 10 with the highest projected growth and those with the lowest growth; (in some cases a loss of population) Those with the highest growth rates tend to be urban areas.

Exhibit 42



The growth of innovative community services has been somewhat slow despite Division enthusiasm and support. For the most part SA and MH populations are not receiving care that is intensive enough to prevent state facility use and promote the community outcomes NC says it wants. Rural residents are getting the least service. Potential barriers may include:

- Lack of skilled workforce to provide services
- No incentive to provide more intensive supports
- Focus on recovery has not been embraced
- Economy of scale issues are a barrier to providing more intensive services: that is current reimbursement rates do not allow a cost effective service to be provided. As an example, providers may contend that they cannot staff ACT teams because the staff requirements are too great, and that they cannot see enough consumers to pay for the teams themselves, particularly in rural areas.
- There appear to be long term day or sheltered employment models, even though such models have been shown to create dependence on formal systems rather than supporting adults in achieving self-empowerment and social and vocational skills to help them move toward competitive employment and normalized (or “natural”) community recreational opportunities. Once EBP services are implemented, consistent with Medicaid rules and regulations, MH/DD/SA should

consider a moratorium on admissions to these programs and work with the remaining population for transfer to competitive employment or if that is not desired or feasible to integrated social support systems. NC had a workgroup addressing these issues and should implement the plan

The same is true for housing and the proliferation of child residential programs. Policy is needed to establish limits on home occupancy both from an eligibility perspective and from a community integration approach. In addition, NC pays for room and Board costs which in most other states are the responsibility of the consumer through his/her SSI payment or other income. NC has failed to collect these payments and in fact, any systematic way of establishing ability to pay or to coordinate benefits or collect owed reimbursements is not being practiced across the State. Doing so would have a number of positive effects:

- It would discourage parents from wanting a child in placement. When the child is in placement and the parent continues to have the income that was intended to support the child's care there is no incentive for some parents to want the child to return home. The money should be transferred to the residential provider saving the State 13,028,216.
- Establishing an ability to pay fee would bring more dollars into the system and generally encourage a sense of responsibility for one's care and treatment. The State should establish a uniform guideline with an annual reassessment based on taxable income and dependents.
- If the state were to decertify the community ICFMR facilities, transferring the funding to the CAP Waiver, it would be less expensive and self determination initiatives could be used, i.e. consumers in a home could hire their own staff through an arrangement with the LME and a fiscal agent. Ultimately the consumers may want to remain together and purchase the home, a practice which has occurred in other states.

The State has not used peer supports or consumer owned or operated programs. These efforts have been found to reduce the cost of care, but more importantly to result in consumer's development of a sense of empowerment that leads to their recovery. The Model suggests 3,000,000 in new funding each year to support these alternatives that are a part of the recovery culture that needs to be developed in NC.

Physician or psychiatric services, especially medication prescribing and management for both adults and children may be hampered by the lack of psychiatrists who will work in rural NC or who will accept Medicaid or LME funded consumers. Private psychiatrists, community hospitals, and mental health care providers are not well coordinated in many parts of the state. Primary care physicians are not being well utilized for this purpose, and it may be difficult to do so given the nature of the services system structure and the lack of information available to primary care physicians about mental health diagnostic techniques and appropriate service system linkages. The use of advanced practice nurses for this purpose is also not well developed throughout the state. Other mental health specialists such as counselors, psychologists and social workers are also in short

supply in many parts of the state. Integration with healthcare is also slow to advance, although there are some bright spots with FQHCs.

Outpatient services for adults and for children and their families remains relatively traditional without attention to new approaches to multi-systemic or family based interventions for children or to cognitive behavioral therapies for adults that are proving useful for certain types of individuals with identified needs or clinical pathways. Outpatient services are provided for relatively long periods of time without any retrospective review from utilization managers either inside or outside most agencies. The desired outcome for these long term users seems to be long term care coordination or a familiar face to contact. This could be accomplished much more cost effectively through peer supports and self-help settings.

Screening Triage and Referral (STR)

Exhibit 43

NC might want to examine the STR function to ensure that only individuals who meet "target population" criteria are being admitted. Substance Abuse had the widest treated prevalence gap although the gap for mental health varies widely across regions. Review of STR functions is needed to ensure NC LMEs are consistently applying state definitions of target populations. The Access Penetration rate for NC is 14.2 per 1000 compared to the National average of 12.6 per 1000. This is very positive, yet it should be examined to ensure that access is admitting only those persons in the target populations. An index was developed for Access that divides the total caseload by the average monthly caseload. Each Exhibit presents one disability cohort broken into payment sources and age groups and presents the access index for each combination for each LME. The Access for

persons with DD is adequate and stable. For SA and MH Access rates are very high in some areas of the State. Exhibits 43- 45 indicate LME Access Rates above and below

Access Index ; Total Cases Divided by Average Monthly Caseload								
LME	Developmental Disability							
	Medicaid				IPRS			
	C	Y	A	E	C	Y	A	E
Alamance Caswell	1.45	1.14	1.20	0.86	4.03	3.10	1.39	0.78
Albemarle	1.28	1.05	1.07	0.33	6.49	2.18	1.24	0.50
Catawba	1.36	1.44	1.19	1.20	4.84	4.60	1.70	1.14
Centerpoint	1.56	1.60	1.22	4.85	1.74	2.40	1.29	1.41
Crossroads	1.30	1.73	1.22	0.78	3.32	2.03	1.31	0.80
Cumberland	1.56	1.45	1.17	1.30	4.80	3.39	1.36	1.54
Durham	1.55	1.37	1.19	1.35	2.61	3.06	1.23	1.18
Eastpointe	1.33	1.25	1.17	1.19	6.09	4.32	1.30	1.48
Edgecombe Nash/Wilson Greene	1.38	1.36	1.17	1.79	4.92	2.90	1.26	1.15
Five County	1.30	1.41	1.27	2.10	4.15	2.12	1.27	1.33
Foothills	1.28	1.37	1.25	1.18	3.50	0.69	1.20	0.91
Guilford	1.37	1.19	1.22	1.70	3.96	2.61	1.36	1.18
Johnston	1.23	1.29	1.11	1.00	2.12	2.63	1.64	1.85
Mecklenburg	2.08	1.51	1.39	1.26	2.68	2.42	1.58	1.27
Neuse	1.28	3.06	1.23	0.43	4.35	1.85	2.23	0.35
New River	1.28	1.18	1.18	2.10	3.71	4.07	1.29	1.31
Onslow	1.48	1.32	1.18	6.62	3.56	3.36	2.10	6.86
Opc	1.59	1.26	1.19	4.67	2.40	5.55	1.50	2.03
Pathways	1.38	1.16	1.12	1.45	2.07	2.18	1.37	1.20
Pitt	1.39	1.01	1.10	1.13	4.07	1.89	1.52	1.71
Roanoke Chowan	1.47	1.01	1.25	2.09	6.75	0.75	1.38	3.25
Sandhills	1.48	1.19	1.18	0.94	2.65	2.63	1.35	1.05
Smoky Mtn	1.80	2.80	1.22	0.86	3.92	2.77	1.59	1.18
Southeastern	1.45	1.12	1.20	1.11	6.71	3.70	1.85	0.86
Southeastern Reg	1.40	3.89	1.23	1.37	4.90	2.58	1.61	1.37
Tideland	3.40	0.86	1.19	2.90	3.90	0.59	1.30	1.21
Wake	1.41	1.26	1.13	1.02	2.82	3.54	1.43	1.47
Western Highlands	1.46	2.72	1.17	0.97	4.72	3.52	1.34	1.14
Statewide Average	1.51	1.54	1.19	1.73	3.99	2.77	1.46	1.48
Standard Deviation	0.41	0.71	0.06	1.42	1.39	1.14	0.26	1.18
Value Above One Std Dev	1.92	2.24	1.25	3.16	5.38	3.90	1.72	2.66
Value Below One Std Dev	1.10	0.83	1.13	0.31	2.61	1.63	1.21	0.30
Number Within +/- Std Dev	26	24	21	25	20	21	24	26
Number Above One Std Dev	2	4	2	3	4	4	3	2
Number Below One Std Dev	0	0	5	0	4	3	1	0

the mean. Given the differences in which populations vary around the average, one might assume a very random pattern across the State which could mean different things:

- LMEs favor a certain population for any variety of reasons
- LMEs have special funding for a given population
- LMEs with high Access rates are located in a State Facility area that influences access

Certainly it appears likely that Access is not uniform across the State.

Exhibit 44

Access Index ; Total Cases Divided by Average Monthly Caseload								
Substance Abuse								
LME	Medicaid				IPRS			
	C	Y	A	E	C	Y	A	E
Alamance Caswell	4.20	2.80	3.49	4.88	4.27	4.88	4.76	2.67
Albemarle	3.29	4.40	4.23	0.83	8.78	5.79	5.09	6.17
Catawba	3.57	5.11	4.59	12.00	6.53	6.67	5.73	12.00
Centerpoint	2.95	6.66	4.03	5.07	5.98	5.14	4.53	8.00
Crossroads	2.99	3.52	4.37	7.38	6.25	4.59	4.34	5.33
Cumberland	3.11	5.36	3.62	6.00	5.30	6.92	5.86	12.00
Durham	2.78	4.91	2.70	3.33	4.60	5.76	4.41	9.00
Eastpointe	2.75	8.28	3.72	6.82	6.51	8.43	5.33	5.00
Edgecombe Nash/Wilson Greene	3.19	3.21	4.21	7.00	4.84	4.88	4.43	2.28
Five County	4.71	5.54	3.62	5.40	3.05	6.29	4.68	2.40
Foothills	4.14	6.33	5.01	6.50	4.92	4.50	5.46	6.00
Guilford	3.93	5.02	3.53	7.50	5.02	6.10	4.27	7.50
Johnston	4.57	4.80	3.52	5.45	6.00	5.29	3.95	4.42
Mecklenburg	3.57	5.50	3.45	12.00	4.72	6.10	5.84	7.00
Neuse	2.08	2.17	3.38	4.67	8.36	3.11	4.34	4.00
New River	5.37	4.27	3.66	2.22	5.59	4.11	4.92	7.92
Onslow	8.45	5.00	4.08	7.00	4.06	6.33	4.92	9.00
Opc	3.12	5.20	3.46	4.84	6.36	5.45	4.73	1.19
Pathways	3.73	4.34	3.20	7.00	4.65	6.59	5.43	4.80
Pitt	2.71	4.32	2.80	7.20	2.72	3.58	2.89	5.45
Roanoke Chowan	2.65	6.75	3.15	4.30	4.71	4.00	4.82	5.35
Sandhills	3.70	3.58	3.78	5.50	6.42	5.83	4.62	5.90
Smoky Mtn	4.43	8.07	4.08	4.14	4.51	6.19	4.85	1.29
Southeastern	3.11	3.80	3.78	6.00	4.61	5.67	4.05	5.75
Southeastern Reg	3.46	5.23	3.87	5.71	6.00	6.37	5.64	8.06
Tideland	3.52	3.73	5.45	5.49	2.73	4.72	5.28	4.89
Wake	3.10	4.27	3.30	6.00	4.32	5.39	4.32	11.00
Western Highlands	3.84	4.20	4.27	5.81	7.13	7.25	4.23	4.34
Statewide Average	3.68	4.87	3.80	5.93	5.32	5.57	4.78	6.03
Standard Deviation	1.18	1.42	0.61	2.30	1.46	1.16	0.66	2.90
Value Above One Std Dev	4.86	6.29	4.41	8.23	6.78	6.73	5.44	8.93
Value Below One Std Dev	2.50	3.45	3.19	3.63	3.86	4.40	4.11	3.12
Number Within +/- Std Dev	25	20	22	23	22	21	20	18
Number Above One Std Dev	2	5	3	2	3	3	5	5
Number Below One Std Dev	1	3	3	3	3	4	3	5

Exhibit 45

Access Index ; Total Cases Divided by Average Monthly Caseload

Mental Health								
LME	Medicaid				IPRS			
	C	Y	A	E	C	Y	A	E
Alamance Caswell	2.22	3.22	2.52	4.16	3.21	4.02	3.04	3.36
Albemarle	2.06	2.74	2.14	2.80	3.98	6.17	3.78	5.07
Catawba	2.51	3.71	2.59	3.26	4.18	3.80	2.81	2.58
Centerpoint	2.59	3.89	3.02	4.48	3.65	4.73	3.48	7.33
Crossroads	2.41	4.09	2.74	3.56	3.53	4.43	3.21	3.69
Cumberland	2.50	3.08	2.46	3.06	4.94	4.96	3.58	3.38
Durham	1.83	2.22	1.98	2.72	2.53	3.77	2.89	2.39
Edgecombe Nash/Wilson Greene	2.52	2.87	2.34	2.74	4.38	5.49	3.78	4.33
Five County	2.31	2.95	2.58	3.08	3.65	6.38	3.67	4.97
Foothills	2.14	3.07	2.33	2.67	4.00	4.69	3.13	4.61
Guilford	2.48	4.08	2.56	3.63	2.95	6.34	3.13	2.84
Johnston	2.47	2.94	2.94	3.42	2.74	4.13	3.11	3.48
Mecklenburg	2.61	2.65	2.39	2.64	3.20	3.15	2.76	2.93
Neuse	2.23	2.68	2.76	3.41	3.18	5.68	3.80	4.22
New River	2.30	2.05	2.53	2.70	4.01	4.22	3.69	4.15
Onslow	2.48	2.93	1.91	2.69	4.48	5.59	3.16	3.50
Opc	2.39	3.41	2.41	2.47	3.37	6.43	4.18	4.50
Pathways	2.05	2.73	2.27	2.39	2.92	5.28	3.06	3.53
Pitt	2.03	2.82	2.36	3.07	4.72	5.33	3.47	3.53
Roanoke Chowan	1.93	3.58	2.70	2.82	3.53	4.41	4.00	5.57
Sandhills	2.30	4.53	2.22	2.57	3.43	4.05	2.78	2.89
Smoky Mtn	2.21	3.21	2.66	2.97	3.88	5.19	3.03	3.08
Southeastern	2.43	3.22	2.73	4.23	3.96	5.37	4.19	4.92
Southeastern Reg	2.43	3.69	2.53	2.53	3.51	5.41	3.44	3.81
Tideland	2.28	2.54	2.32	2.66	4.24	5.39	3.31	2.89
Wake	2.13	5.22	2.54	3.39	3.84	6.16	3.58	4.52
Western Highlands	1.84	2.20	2.19	3.03	2.68	4.32	2.83	2.76
Statewide Average	2.16	2.88	2.28	3.58	3.36	5.22	3.12	3.78
Standard Deviation	2.28	3.19	2.46	3.10	3.64	5.00	3.36	3.88
Value Above One Std Dev	0.22	0.72	0.26	0.55	0.61	0.88	0.42	1.07
Value Below One Std Dev	2.50	3.90	2.73	3.65	4.26	5.89	3.78	4.95
Number Within +/- Std Dev	2.06	2.47	2.20	2.54	3.03	4.12	2.94	2.81
Number Above One Std Dev	18	21	19	22	19	18	17	21
Number Below One Std Dev	4	4	5	3	4	5	6	4
	6	3	4	3	5	5	5	3

Continuity of Care

The major problem in NC at this time is that even with the high numbers of North Carolinians in need of mental health services, many do not receive an adequate continuity of care. As demand increases, continuity of services - as measured by number of visits per year - is declining. Despite the fact that NC purchases Evidence Based Services they are not consistently available and are not applied based on fidelity models consistently across the state. In addition, average units of service provided are not sufficient in amount to produce a positive outcome as seen when calculating the average units per person in the raw data files.

Continuing engagement with treatment and recovery services is one of the most important aspects of addressing an episode of illness or ongoing disabilities associated with severe MH/DD/SA problems. Interruption of care, for whatever reason, is among the most significant obstacles to establishing a stable recovery. It is in response to these circumstances that the American Association for Community Psychiatry (AACP) prepared guidelines to assist providers and planners in establishing standards for the management of transitions between levels of care.

Concerns for low continuity of service are validated using a continuity index derived by dividing the average monthly caseloads by the total annual caseload. When this index equals 1.00 it means that the average monthly case load is equal to the total number of persons seen annually so every case is receiving a service almost every month. When Continuity = .5, cases are receiving a service approximately 6 months out of the 12-month period. As the following exhibits indicate, continuity is quite low except for persons with DD, for most cohorts across all LMEs.

Each Exhibit presents one disability cohort broken into payment sources and age groups and presents the continuity index for each combination for each LME. The fonts are colored red if the value exceeds one standard deviation above the average across all LMEs for that particular cohort (i.e. column) and a green font if the value is below one standard deviation from the average value across all LMEs. Summary calculations at the bottom of each table report on the number of LMEs with continuity indices that are above and/or below the average value.

Rates for DD are generally in the 0.7-0.8 range, especially when the payer is Medicaid. The ranges for SA are only 0.17-0.29, and for MH they are 0.21-0.45.

Exhibits 46-48 provide evidence of the lack of continuity of service. The green font cells are at least one standard deviation below the mean for continuity of care. There could be a number of reasons for this:

- Staff in these LMEs have not owned the culture that is needed to serve these populations consistently throughout the year
- There is a paucity of available or well trained staff.
- Staff do not do outreach to keep people in service, perhaps because of large caseloads or lack of supervision

- There is no real incentive beyond the altruistic ones to have people seen regularly because outcome indicators are not being measured
- Programs may have been initiated that are not fully implemented
- The pattern is scattered and may indicate population preferences or funding priorities. In any case, there is a widespread pattern of inadequate continuity of care and thus level of care.

Exhibit 46

Continuity Index ; Average Monthly Cases Divided by Total Cases								
Developmental Disability								
LME	Medicaid				IPRS			
	C	Y	A	E	C	Y	A	E
Alamance Caswell	0.69	0.88	0.84	0.53	0.34	0.40	0.73	0.57
Albemarle	0.80	0.70	0.94	0.33	0.14	0.17	0.81	0.50
Catawba	0.73	0.69	0.84	0.83	0.21	0.22	0.59	0.88
Centerpoint	0.65	0.65	0.82	0.58	0.58	0.57	0.78	0.77
Crossroads	0.77	0.60	0.82	0.58	0.31	0.57	0.77	0.56
Cumberland	0.64	0.69	0.85	0.77	0.21	0.29	0.73	0.65
Durham	0.65	0.73	0.84	0.74	0.38	0.33	0.81	0.84
Eastpointe	0.75	0.82	0.86	0.85	0.17	0.34	0.77	0.72
Edgecombe Nash/Wilson Greene	0.73	0.77	0.85	0.65	0.23	0.41	0.80	0.88
Five County	0.77	0.74	0.79	0.43	0.39	0.56	0.79	0.80
Foothills	0.78	0.76	0.82	0.87	0.35	0.09	0.84	0.62
Guilford	0.73	0.84	0.82	0.59	0.25	0.38	0.74	0.85
Johnston	0.81	0.78	0.90	1.00	0.47	0.38	0.61	0.54
Mecklenburg	0.48	0.66	0.72	0.79	0.37	0.41	0.63	0.79
Neuse	0.80	0.45	0.81	0.26	0.26	0.24	0.45	0.31
New River	0.79	0.86	0.85	0.75	0.33	0.36	0.78	0.53
Onslow	0.68	0.76	0.85	0.44	0.29	0.38	0.50	0.33
Opc	0.63	0.80	0.84	0.69	0.42	0.34	0.67	0.55
Pathways	0.73	0.86	0.89	0.73	0.51	0.48	0.73	0.84
Pitt	0.72	0.99	0.91	0.89	0.25	0.53	0.66	0.58
Roanoke Chowan	0.69	0.60	0.81	0.69	0.09	0.36	0.73	0.27
Sandhills	0.69	0.85	0.85	0.82	0.45	0.44	0.74	0.49
Smoky Mtn	0.58	0.72	0.84	0.40	0.17	0.34	0.66	0.67
Southeastern	0.69	0.90	0.84	0.92	0.15	0.28	0.55	0.53
Southeastern Reg	0.72	0.67	0.82	0.77	0.22	0.39	0.63	0.76
Tideland	0.67	0.44	0.85	0.35	0.14	0.29	0.78	0.61
Wake	0.71	0.80	0.89	0.98	0.35	0.28	0.70	0.68
Western Highlands	0.69	0.65	0.85	0.80	0.30	0.37	0.76	0.69
Statewide Average	0.71	0.74	0.84	0.68	0.30	0.36	0.71	0.64
Standard Deviation	0.07	0.13	0.04	0.20	0.12	0.11	0.10	0.17
Value Above One Std Dev	0.78	0.86	0.88	0.88	0.42	0.48	0.80	0.80
Value Below One Std Dev	0.63	0.61	0.80	0.48	0.17	0.25	0.61	0.47
Number Within +/- Std Dev	20	21	21	18	17	19	21	20
Number Above One Std Dev	5	3	5	4	5	5	3	5
Number Below One Std Dev	3	4	2	6	6	4	4	3

Exhibit 47

Continuity Index ; Average Monthly Cases Divided by Total Cases

Substance Abuse								
LME	Medicaid				IPRS			
	C	Y	A	E	C	Y	A	E
Alamance Caswell	0.27	0.21	0.29	0.25	0.25	0.09	0.21	0.04
Albemarle	0.26	0.10	0.25	0.14	0.16	0.15	0.20	0.19
Catawba	0.28	0.20	0.22	0.08	0.15	0.15	0.17	0.08
Centerpoint	0.34	0.17	0.25	0.21	0.17	0.21	0.22	0.06
Crossroads	0.35	0.36	0.23	0.16	0.18	0.22	0.23	0.11
Cumberland	0.32	0.19	0.28	0.17	0.19	0.14	0.17	0.08
Durham	0.36	0.20	0.37	0.30	0.22	0.17	0.23	0.11
Eastpointe	0.38	0.14	0.27	0.12	0.16	0.12	0.19	0.12
Edgecombe Nash/Wilson Greene	0.33	0.19	0.24	0.08	0.21	0.21	0.23	0.11
Five County	0.34	0.19	0.28	0.16	0.08	0.14	0.22	0.02
Foothills	0.26	0.21	0.21	0.09	0.32	0.13	0.18	0.04
Guilford	0.25	0.20	0.28	0.13	0.20	0.16	0.23	0.13
Johnston	0.22	0.21	0.28	0.18	0.17	0.19	0.25	0.23
Mecklenburg	0.28	0.18	0.29	0.08	0.21	0.16	0.17	0.14
Neuse	0.21	0.25	0.30	0.10	0.12	0.16	0.23	0.03
New River	0.25	0.19	0.29	0.19	0.19	0.25	0.21	0.09
Onslow	0.14	0.21	0.25	0.15	0.25	0.16	0.20	0.13
Opc	0.36	0.22	0.30	0.56	0.20	0.20	0.21	0.38
Pathways	0.27	0.25	0.32	0.06	0.22	0.15	0.18	0.09
Pitt	0.37	0.23	0.36	0.14	0.37	0.28	0.35	0.18
Roanoke Chowan	0.35	0.09	0.33	0.56	0.06	0.15	0.21	0.27
Sandhills	0.30	0.22	0.27	0.09	0.16	0.18	0.22	0.13
Smoky Mtn	0.18	0.16	0.26	0.14	0.09	0.12	0.21	0.07
Southeastern	0.32	0.28	0.27	0.08	0.23	0.19	0.25	0.09
Southeastern Reg	0.31	0.20	0.26	0.28	0.18	0.16	0.18	0.18
Tideland	0.33	0.10	0.19	0.09	0.13	0.09	0.20	0.17
Wake	0.32	0.23	0.30	0.17	0.23	0.19	0.23	0.09
Western Highlands	0.28	0.16	0.24	0.11	0.16	0.16	0.24	0.13
Statewide Average	0.29	0.20	0.27	0.17	0.19	0.17	0.22	0.12
Standard Deviation	0.06	0.06	0.04	0.12	0.07	0.04	0.03	0.08
Value Above One Std Dev	0.35	0.25	0.31	0.30	0.25	0.21	0.25	0.20
Value Below One Std Dev	0.24	0.14	0.23	0.05	0.12	0.12	0.18	0.05
Number Within +/- Std Dev	19	21	20	25	23	20	22	21
Number Above One Std Dev	5	3	4	3	2	4	2	3
Number Below One Std Dev	4	4	4	0	3	4	4	4

Exhibit 48

Continuity Index ; Average Monthly Cases Divided by Total Cases								
Mental Health								
LME	Medicaid				IPRS			
	C	Y	A	E	C	Y	A	E
Alamance Caswell	0.46	0.31	0.40	0.28	0.32	0.25	0.33	0.31
Albemarle	0.49	0.37	0.47	0.36	0.25	0.18	0.27	0.22
Catawba	0.40	0.27	0.39	0.31	0.24	0.26	0.36	0.39
Centerpoint	0.39	0.27	0.33	0.23	0.27	0.21	0.29	0.18
Crossroads	0.42	0.25	0.36	0.29	0.28	0.24	0.31	0.28
Cumberland	0.40	0.33	0.41	0.33	0.20	0.20	0.28	0.30
Durham	0.55	0.45	0.50	0.37	0.40	0.27	0.35	0.42
Eastpointe	0.40	0.36	0.43	0.36	0.23	0.19	0.26	0.24
Edgecombe Nash/Wilson Greene	0.43	0.34	0.39	0.33	0.29	0.16	0.27	0.20
Five County	0.47	0.34	0.43	0.39	0.25	0.22	0.32	0.23
Foothills	0.41	0.25	0.39	0.29	0.34	0.16	0.32	0.36
Guilford	0.41	0.34	0.34	0.29	0.37	0.24	0.32	0.29
Johnston	0.38	0.38	0.42	0.38	0.31	0.32	0.36	0.34
Mecklenburg	0.45	0.37	0.36	0.29	0.31	0.18	0.26	0.24
Neuse	0.44	0.54	0.40	0.38	0.27	0.24	0.27	0.30
New River	0.41	0.35	0.53	0.39	0.23	0.19	0.32	0.29
Onslow	0.42	0.30	0.42	0.41	0.30	0.18	0.25	0.23
Opc	0.49	0.37	0.44	0.43	0.34	0.21	0.33	0.28
Pathways	0.50	0.36	0.42	0.33	0.21	0.19	0.29	0.28
Pitt	0.52	0.28	0.37	0.35	0.28	0.23	0.25	0.18
Roanoke Chowan	0.44	0.23	0.45	0.39	0.29	0.25	0.36	0.36
Sandhills	0.47	0.33	0.38	0.34	0.26	0.20	0.33	0.34
Smoky Mtn	0.41	0.32	0.37	0.25	0.26	0.20	0.24	0.21
Southeastern	0.41	0.27	0.40	0.41	0.29	0.19	0.29	0.27
Southeastern Reg	0.44	0.40	0.44	0.40	0.24	0.19	0.30	0.37
Tideland	0.47	0.25	0.39	0.31	0.27	0.19	0.28	0.23
Wake	0.54	0.45	0.46	0.33	0.37	0.23	0.35	0.36
Western Highlands	0.46	0.36	0.44	0.29	0.31	0.20	0.32	0.28
Statewide Average	0.45	0.34	0.41	0.34	0.29	0.21	0.30	0.28
Standard Deviation	0.05	0.07	0.05	0.05	0.05	0.04	0.04	0.06
Value Above One Std Dev	0.49	0.41	0.46	0.39	0.33	0.25	0.34	0.35
Value Below One Std Dev	0.40	0.27	0.37	0.29	0.24	0.18	0.27	0.22
Number Within +/- Std Dev	20	20	21	19	18	20	18	17
Number Above One Std Dev	4	3	3	5	5	4	5	6
Number Below One Std Dev	4	5	4	4	5	4	5	5

The Exhibits show that the following LMEs are not negative outliers for continuity: Durham, OPC, Sandhills, Southeastern, Wake and Western Highlands. Durham and Wake have higher averages overall for continuity in mental health services. Durham, OPC, Pitt and Roanoke Chowan stand out with better continuity indices for substance abuse services.

For consumers, it is important that they experience a high continuity of care throughout the year. The question becomes, how much can the State afford? If the total number of persons served goes up (improving prevalence), without an increase in the average monthly caseload level, then continuity of care will go down. Therefore the State has to increase the average monthly caseload at a faster rate while increasing the total annual

persons served (prevalence) The Model permits a modification of the index. In the initial run of the Models we left continuity ratios out of the mix and projected costs in the 500 million dollar range over 5 years. However, when the continuity factors are increased to .7, the costs escalate to 2.7 billion. The State will be able to reach consensus on this factor and through using the models may reduce the 2.7 billion to a more reasonable amount while still providing the “right dose” of service.

The continuity for persons with developmental disabilities is excellent. It is not the same for persons with mental illnesses, children with serious emotional disturbances (although they fared better than adults) and persons with substance abuse disorders. It is costly to provide “enough” care to make a difference and the State of NC will have to decide how much “enough” is. If the State provides too much continuity, they induce dependency; if they do not provide enough they do not have an effective system and people are not helped in the process.

Chapter V – Projected Start-up and Total Funding Needed

In this Chapter you will find the following:

- ☑ Findings of the EBP Stochastic Models for the years 2005 through 2010 based on 2005 population and utilization data trended forward for each year. These models reflect the full continuum of care needed for each disability group by LME assuming an EBP Delivery System operating at minimal levels of continuity and access
- ☑ A Crossover Analysis for services to be shared
- ☑ Development of new services and expanded deployment of existing services
- ☑ Qualified Staff
- ☑ Percent of the population expected to use state-level facilities by LME
- ☑ Start-up and the total funding needed over a five-year-period (2005 -2010) from the Trust Fund for Mental Health, Developmental Disabilities and Substance Abuse Services and Bridge Funding Needed to implement the long-range plan reasonably over the ensuing five-year period
- ☑ What it would cost each year if all desired services were provided with average Access (treated prevalence) and the appropriate intensity and continuity through 2010.

Models

Given the number of variables which interact to produce an effective MH/DD/SA system, complex mathematically driven modeling was necessary; so that elements could be readily configured or re-configured by the State to accommodate varying sub geographical regions, local variability and circumstances, and accommodate separate service coverage for different eligibility groups. The model must take the following basic equation relating utilization to cost and repeat it for every specific service, and for each combination of disability, age group, funding source, county, and LME.

$$\text{Total Cost of Service ABC} = (\# \text{ of Users of Service [x] }) \times (\# \text{ of Units of Service [x] per User}) \times (\text{Cost per Unit of Service [x]})$$

The first model is the most critical and provides the baseline against which various alternative scenarios or alternative models are built and can be compared. The Actual Model reflects current levels (SFY 2005) of service volume, intensity and costs. The State can build alternative scenarios using this Model based upon the “realities of political will”. As state funding varies, the Division needs a mechanism to alter the coverage under the non-Medicaid plan, which these Models provide. Likewise the State may use modeling to adjust benefit levels and cost if CMS and/or the State cannot afford the current coverage.

In summary, the following three models were constructed;

One called the **Actual Model** that represents SFY 2005 actual practices, based on actual data on reported utilization and claimed costs, (Again local services supported by local funding is NOT reflected in the Actual Model).

An “ideal” or **Evidence-Based Practice (EBP) Model** that would bring NC to national averages for treated prevalence across populations and increase the continuity of service, thereby allowing for a significant reduction in State Facility use, and

The **Defined Benefit Model** that originally was designed to reduce State cost or contain them by limiting the scope, amount and duration of services to non-Medicaid-eligible persons. However, the State preferred, for this initial version, to limit service eligibility requirements rather than the scope, amount or duration of services.

The Actual Model is based on actual claims data for FY 2005. The second Model reflects an “Evidence-Based, Best-Practice” approach where the scope and intensity (frequency and duration) of service was based on research reflecting best-practices; that is, community-based service packages that honor self-determination, family resiliency, recovery principles, and cultural sensitivity for target populations. This EBP Model reflects what it would cost if all desired services were provided. At this point in time Best Practices or EBP services might be impossible for the State to fund with the appropriate intensity. However, coupled with an incentive to limit State Psychiatric Hospital use by providing sufficient community based services and recognizing the fact that many of the community-based services would result in increased Federal share as best practices were increased in the community, the State’s cost could be reduced significantly. In all three models, Medicaid is presented as a “whole dollar” and the State’s share and the local share of Medicaid are not broken out separately from the Federal share.

The following Exhibit 49 presents the Master Service sheet from the Actual Model showing the entire list of services reflected in the claims data which was reviewed and for each service, a “1” in the cells to the left of each service indicates by which columns the “1” is placed, to which disability group, age group, and payer each service is applicable. For example, Assertive Outreach is applicable to all four age groups in each Disability Group, but only for payment using State general revenue (i.e. IPRS). The first 39 services are considered to be community-based, followed by space for State Facility information and then services to be funded on a Budgeted Fixed Allocation.

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The Best-Practice or EBP Model was utilized as the basis for projecting costs, based upon start-up, phase-in and correction of gaps, including goals the State has for increasing treated prevalence and implementing evidence-based practices as well as not providing State General Fund Services to enhance the Medicaid Benefit. .

For each year, 2006, 2007, 2008, 2009, and 2010 the EBP Model was used to estimate what it would cost NC if all desired services were gradually introduced as population trended upward and as cost –of-living increased the average cost per unit of service and as continuity improved relative to improved levels of access or treated prevalence.

The following Exhibit 50 presents the Master Service list from the EBP Model showing the entire list of services and indicating which population, age group and payer are applicable. This Exhibit also provides information on the average unit cost or price to be paid for each service unit. Services labeled “integrated” are new services that can be provided as a part of the current service definitions. For example, Psycho-Education can be provided as an outpatient service, through community support or ACTT or PSR. Because they require additional effort beyond the original definition, we have added these services to the Master list and applied an estimated unit price. The state can then consider how these costs should be billed, either separately or under the service definition where the new practice is employed/integrated.

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In the Defined Benefit Model, the Model has been initially populated to calculate costs on only a limited sub-set of the target population rather than projecting reduced costs by limiting the scope, amount or duration of service. Reducing scope, amount and duration of services, in addition to reducing the number of service recipients is another option but not one favored by Division staff given the month to month movement of consumers from Medicaid-eligibility and non-eligibility. It is our recommendation that when new cases enter the treatment system and the likelihood is high that these individuals will qualify for Medicaid, they should be started in an appropriate service that will later be available through the Medicaid Plan. If it later becomes clear that an individual will not qualify for Medicaid because of the lesser degree of their disability or their income status, they must then meet criteria for treatment which may be more restrictive eligibility criteria. In many cases, individuals may receive Assessment-only to rule out significant disability that would qualify the individual as a member of the "Target Population". Several assumptions are made in the Defined Benefit Model including the fact that a percentage of consumers will receive Medicaid after the first 90 days and that payment is often retroactive. Others may never qualify for Medicaid. In NC the percentage of the population that is eligible for Medicaid is two percentage points below the national average of 19%. The Defined Benefit Model illustrates only those services provided for the non-Medicaid-Eligible population. In this case, the Model has reduced the number of persons in the population to be treated by reducing treated prevalence (annual number of persons served per year), but only in those counties where the average treated prevalence exceeded State statewide averages (where they equate to national treated prevalence figures) or prevalence within any cohort indicating that the LME may have been authorizing services to non-target populations.. Below in Exhibit 51 is the Master Service List for the Defined Benefit Model which limits services to IPRS cohorts only. The units of service remain the same as the EBP Model.

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Programs to be Shared Across LMEs and the Importance of Program Capacity

The State cannot afford to offer every service program in every LME throughout the State, much less offer them all to all counties. Therefore, from an economic efficiency perspective, it is important to analyze which programs by virtue of their utilization and cost profile become candidates for sharing across LMEs. The Division of MH/DD/SA has established a set of “core services” that it considers should be available in each region. However, the Division needs to include minimum and maximum capacity guidelines, designed to promote cost-efficient utilization, and standards by which to measure when “enough” services are available (for example, supportive case management at a ratio of 1.0 FTE to 40 consumers; a telemedicine videoconferencing site within an hour drive for the attending psychiatrist and for the consumer; mobile crisis face-to-face intervention with a one-hour drive for the mobile crisis team or worker; a psychiatrist within 50 miles with a caseload of no more than 500 consumers). These core services should then be developed or expanded as resources become available, until the capacity targets are met. The cost of services relative to their capacity targets should be the priority for any new resource expenditures and each LME’s plan should be required to include how these core services will be developed and/or expanded, and over what time period, keeping in mind standards for cost-efficiency as well as choice and convenience. It should be noted that core services should be the same for all regions. However, the capacity targets and the model for service delivery may vary based on the rural or urban nature of some of NC’s regions. These core services are designed not only to provide an array of services that will meet the needs of each region’s eligible persons, but to prevent the unnecessary expenditure of dollars for services that are less effective but have higher cost because lower-cost and lower-intensity services that are often more effective are not available. These core services should exist within each region and often within geographic sub-regions. Beyond core services, each region should be able to identify and plan for additional optional services it wants to see funded or provide or have available even if this service is outside the regional boundaries. To the extent possible, service dollars should allow for this regional flexibility, while still requiring accurate and timely encounter data to be captured as a condition of payment or funding.

Because users (i.e. service consumers) and service units per user are important variables driving cost and both of these variables are generally influenced by any limits on the number of consumers to be served, another critical variable in any analysis of shared programs becomes program capacity.

It is also important to consider whether program capacity is fixed, or potentially variable. A good example of a fixed capacity program is an inpatient hospital unit or any other type of residential program. There is an upper limit on the number of beds so there is a fixed capacity. However, the number of unique persons to be served in such a fixed capacity program can vary, depending upon the average length of stay (ALOS) or “turnover rate”. If “used capacity” is defined as the number of consumers served per year, then a residential program could be said to have variable used capacity. But the

maximum number of unique persons the program could serve in a year would be fixed for any given average length of stay (ALOS). Generally speaking then, assuming a stable pattern of use per user, capacity of residential programs is considered a fixed factor. Fixed capacity programs are not desirable to have in any array of service although in some circumstances they are unavoidable and necessary. They are not desirable because when demand is reduced (e.g. less need for hospital beds due to modern pharmaceuticals and community-based alternatives) the costs do not go down because most of the costs are fixed regardless of the volume of use. To justify the investment and costs, patients may be hospitalized longer than necessary or more may be admitted than is necessary. Historically, providers have preferred fixed cost programs when they could readily “sell” all the units to some payer. Fixed cost programs are easily operated at a stable and full capacity census.

The payer, therefore, generally wants to give consideration to how to convert a fixed capacity program into a variable capacity cost. Payers do not want to own a facility if they can avoid it, and they only want to pay for the units that they consume. However, in a facility with low average census, the provider-owner has to spread the cost of unoccupied beds, for which they cannot bill to the charges for occupied beds. So the payer who buys from a low census facility has to pay a high unit cost to subsidize the empty beds.

A variable capacity program is one where the supply of providers (total capacity to provide units of service) can be expanded or diminished to match the growing or shrinking demand by consumers of the service. While most services historically paid for by State governments were originally designed as fixed capacity programs (e.g. State Facilities), most community-based services that are not rigidly tied to facilities and rigid programming schedules, can be considered variable capacity and variable cost programs. Variable capacity programs can be reimbursed on a variable basis, paying only when services are duly authorized and used by the consumer. Any provider who stocks too much inventory (employs too many staff, has low staff productivity) runs the risk of unused capacity that will not be “sold” to the payer (State). Given these considerations, the important questions for State government owned-and-operated services and for the community, facility-based services they pay for become: How much capacity is necessary to meet appropriate, possibly shifting demand? How much capacity can I afford to pay for, relative to the capacity necessary to meet appropriate demand?”

Is there any way to design the program in order to make the capacity somewhat variable, with lower fixed costs?”

What is the effect of consumers’ choice of alternatives, and what is the necessary number of cases each provider must serve to be economically viable?

The issue of capacity is further complicated by how it is defined. Some may think of it as the number of persons who can be actively served on any given day, while others may define it as the number of unique individuals that can be served in a given year. While we prefer the latter definition, it also begs the question: how do you define a person as “served”? Does one person using one session in a program count as equivalent to a

person who completes 12 sessions? Therefore, to measure the number of persons served in a year, one must have a definition of what minimum level of service consumption defines a person as being served. One can also report on such measures as total consumer-days of service.

Capacity is also determined by the number of days in the year that the program is operational. Staff productivity can influence program capacity. A program where each clinician has 75% of their payroll hours used for direct services, has more capacity than one where clinicians have only 50% of their payroll hours spent doing direct services. Talking about capacity is almost equivalent to talking about cost. The degree to which capacity is fixed, variable, or blended is dependent upon the overall program design.

Programs with too much capacity run the risk of being inefficient, with high costs per person served. If too little capacity is planned and demand is high the level of service adequate to meet the consumers' needs is not provided. Usually, programs that have variable capacity, and variable cost, are more likely to be efficient than are programs with fixed capacity that must limit access when demands exceed capacity. Another phenomenon seen in fixed capacity programs is that staff members are more likely to maintain caseloads to avoid consumer turnover and additional work, thus creating longer lengths of stay per case and fewer persons served per year than would occur in variable capacity programs.

To adequately address capacity it would be helpful to know how many individuals in a given LME are on a waiting list for services. At this point it is not possible to know with any certainty the service capacity an LME has or does not have. As can be seen on the maps of service availability and through the analyses of the claims data, many LMEs are billing for services that may or may not exist with appropriate capacity to meet the needs of all persons who apply and are eligible for service. We proposed doing a survey of available and used program capacity through the NC Council of Community Programs but it was determined that seeking capacity information from LMEs through the Council would not be fruitful. After "testing the waters", it was decided that any survey effort to collect this information was unlikely to produce uniform and reliable information.

This report attempted to address the issue of sharing program capacity. In order to make available dollars go further in building capacity it is important to ask if LME's can share the cost of common programs in order to permit availability, and some consumer choice, at an affordable cost when local service demand is not sufficient to economically justify the service." To answer this type of question an analyst would ordinarily review available information about program capacity and use broken down by program categories, as follows:

- One-on-One Programs (e.g. Outpatient)
- Number of Direct Service Staff and Their Time Available for Direct Service
- Point-in-Time Active Caseload per staff
- Rate of "No-Shows"

- Average Visits per Active Consumer
- Group Programs
- Number of "slots" that are available each day
- Days of the Year the Program is Operational
- Turnover Rate Among Active Consumers
- Emergency Programs
- Direct Service Staff and Their Time Available for Service
- Time per Intervention
- Days and Hours per Day Available for Service (# of Shifts)
- Days of the Year the Program is Operational
- Case Management
- Direct Service Staff and Their Time Available for Service Point-in-Time
- Average Active Caseload per Staff
- Turnover Rate Among Persons Active in the Caseload
- Team-Based Programs
- Number of program slots available each episode
- Average visits per consumer
- Turnover Rate of consumers
- Residential/Inpatient
 - Number of beds available per day
 - Number of days per year in operation
 - Turnover Rate among Bed Occupants (i.e. Average Length of Stay)

Without access to this information, the same results can be approximated by an analysis of utilization and unit costs taken from claims data. Remember that unit cost is, in part, an indirect measure of service efficiency. For example, a well-used, properly sized residential program will generally have a lower unit cost than a comparable staffed program which has too much unused capacity.

We considered those programs as potentially inefficient and as candidates to consider asking LMEs to share as those having a low volume of users and high unit costs. The first step in this analysis was to review the 24 community-based services represented in the actual claims data and rank them by the number of persons they served in a year statewide and again by their relative cost per unit. Services were first rank ordered in descending order from Most to Least Persons Served and a rank from 1 to 24 was duly assigned to each service (Rank 24 = Served the least number of persons relative to all the other services). Services were also rank ordered in ascending order on average cost per unit (Highest rank = 24 is the service with the highest unit cost relative to all other services). The ranks were then multiplied by each other, so the service with the highest product of these two rank scores would be the service with the relatively highest unit cost and serving the fewest number of persons. The services were then rank ordered based on this "product" score we derived by multiplying the two independent volumes and unit cost ranks.

Exhibit 52 illustrates the calculations that were undertaken to identify the best potential programs for sharing across LMEs

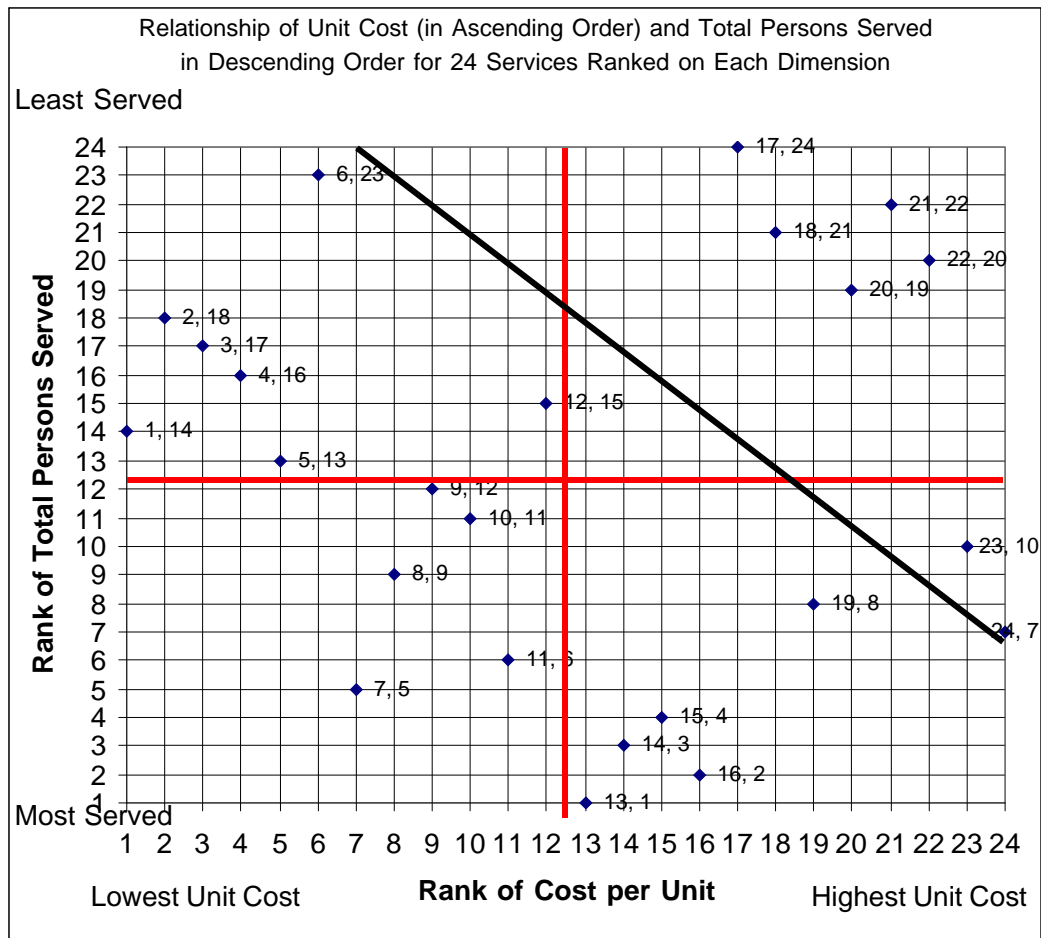
Exhibit 52

Service Group	Avg Cost per Unit (for TOTAL Payers)	Persons Served Statewide	Ascending Rank Cost/Unit	Descending Rank of Persons Served	Product of Ranks	Rank of Products
Guardianship	\$216.51	159	21	22	462	24
ICFMR-Community	\$219.34	2,594	22	20	440	23
Drop-In	\$51.50	57	17	24	408	22
Act Teams	\$203.64	2,742	20	19	380	21
Community-Detox	\$111.18	1,042	18	21	378	20
Facility-Based-Crisis	\$245.25	6,102	23	10	230	19
Supported-Employment	\$24.64	4,328	12	15	180	18
Community-Inpatient	\$467.19	11,792	24	7	168	17
Residential-Treatment	\$140.12	10,276	19	8	152	16
Social-Inclusion	\$4.90	70	6	23	138	15
Medication-Admin	\$14.64	5,877	10	11	110	14
Supported-Independent-Living	\$9.89	5,734	9	12	108	13
Day-Hab/Supports	\$7.97	6,502	8	9	72	12
Assertive-Outreach	\$20.21	12,784	11	6	66	11
Respite	\$4.02	5,271	5	13	65	10
Personal-Care/Assistance	\$3.67	4,133	4	16	64	9
Assessment	\$40.99	97,854	15	4	60	8
Psychosocial-Rehab	\$2.30	3,524	3	17	51	7
Case-Management/Support	\$26.29	103,382	14	3	42	6
Products	\$1.62	2,896	2	18	36	5
Cbs	\$5.49	18,163	7	5	35	4
Outpatient-Md	\$42.86	107,863	16	2	32	3
Community-Rehab-Program	\$1.25	4,442	1	14	14	2
Outpatient	\$24.64	107,895	13	1	13	1

Not all programs that are at the top of this list would necessarily make good candidates for sharing across geographically adjacent LMEs. Any intelligent analysis requires taking into account such non quantitative factors as distance to travel, co-location among two or more two adjacent LMEs, whether the volume and/or the unit cost seem reasonable, and the need for immediacy or close location. Based on the findings we know that ICFMR is a fixed site service that is shared across county boundaries now. Drop In programs have to be local and within easy walking or public transportation distance for the majority of consumers who may use them for frequent and unscheduled activity, and would in the final analysis not make good candidates for sharing.

The services were next plotted on a two-dimensional plot, with average unit cost rank along the bottom X-axis and the volume rank plotted along the vertical Y-axis. Based on this arrangement, services with the highest cost and lowest volume would be placed in the upper right hand corner of this graph. We next drew a diagonal line across the graph joining the median value of unit cost and volume (i.e. a rank of 12.5 would be the median rank among 24 ranks). We slid this diagonal line from the median points until we identified the cluster of services we judged to be good candidates for potential sharing among geographically adjacent LMEs. This two dimensional plot is shown in Exhibit 53.

Exhibit 53



Those services which were ranked high in average cost per unit and which had a low volume of use (services in the upper-right hand corner of Exhibit 53 were those identified as candidates for sharing. The next step was to determine if there were geographically adjacent Counties or LMEs offering one or more of these programs that would be candidates for partners. For each service, we selected the top 15 counties for the “Product of Unit Cost Rank and Person Served per 1000 Rank “ and “Product of Cost per Person Rank and Persons Served per 1000 Ranks”. We then examined the lists to determine where there was overlap between the two ranks and listed those counties in the following Exhibit 54. Drop-In was not plotted since there are only two LMEs offering the service, Wake and Neuse. Community Detoxification is also only available in two areas of the State and therefore was not included. The Exhibit demonstrates that potential candidates could share with other counties listed as candidates who need partners. When that is not reasonable given distance, the Exhibit offers suggestions for partners that are adjacent to or within reasonable distance of the candidate county.

Exhibit 54

Counties Candidates for Sharing					
County	ACTT	Facility Based Crisis	Community Inpatient	PSR	Supported Employment
Almance	X			X	
Alexander				X	
Beaufort	X				
Bertie	X				
Bladen			X		
Buncombe				X	
Burke				X	
Catawba				X	
Chowan		X			
Clay		X			X
Gates	X	X			
Graham	X				X
Greene		X			
Halifax			X		
Hertford	X				
Hoke			X		
Hyde	X			X	X
Johnston	X				
Martin			X		
Polk	X				
Richmond			X		
Robeson			X		
Rockingham	X				
Scotland		X	X		
Stokes					X
Swain	X				
Transylvania		X			
Tyrell	X		X		
Washington	X				X

Services such as inpatient, facility based crisis and detoxification can be shared if they are within a reasonable traveling distance, say 30-60 minutes by car or public transportation or shuttles/van provided through the LME or local providers. Core services should also be analyzed for ease of access, and outcome indicators should be developed to reflect both time between first the consumer's first contact and the diagnostic assessment, and then between assessment and initiation of service delivery.

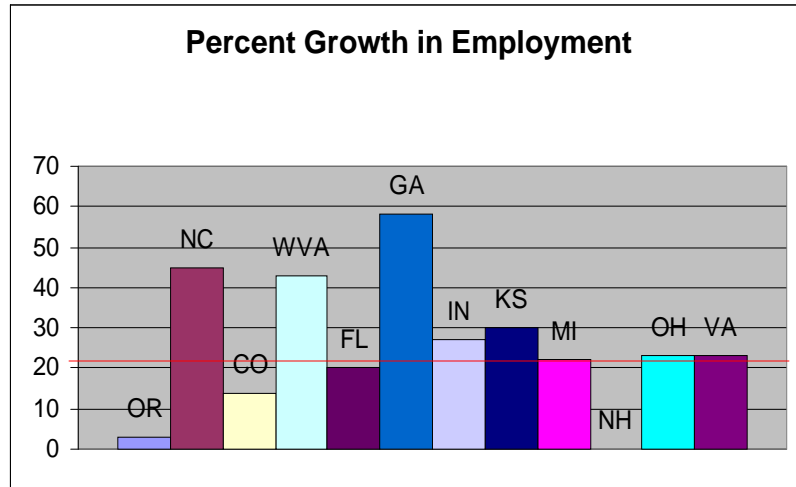
Qualified Staff

Based on current productivity and the inequitable distribution of resources across the state, community provider staffing ratios are probably insufficient to meet the minimum need for services.

Exhibit 55

When prevalence of needs is considered, the gap is even greater. There were more than 328,000 people employed in the health sector in North Carolina in 2000, 8.5% of North Carolina's total workforce. North Carolina ranked 26th among the states in per capita health services employment. Health services employment in North Carolina grew 81% between 1988 and 2000,

while the state's population grew by 25%, resulting in a net per capita growth of 45% in health services sector employment. This was more than twice the national rate of net per capita growth in the health services sector of 21%. The total population of North Carolina is projected to grow 13% between 2000 and 2020, while the population 65 and over is projected to grow 76% between 2000 and 2020 as seen in Exhibit 56.



Service System Capacity is a function of the number of staff and the direct consumer contact hours available for each staff. A system needs measures of each in order to judge capacity.

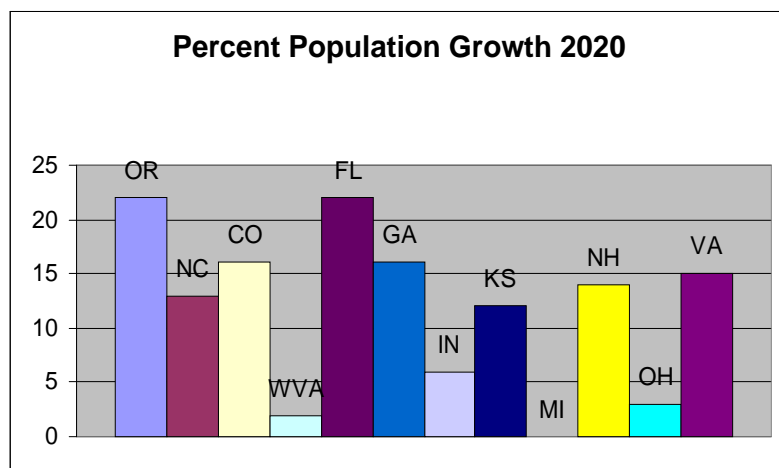
Exhibit 56

The definition and delivery of a service should be consistent in order to determine capacity for a particular service.

Otherwise, some providers may show greater capacity due to the fact they are not adhering to the basic requirements of the service.

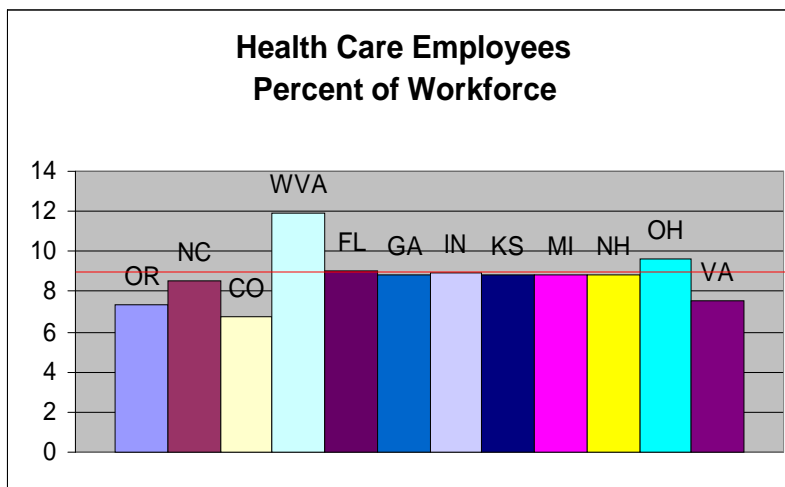
In evaluating the workforce needs, several measures were used including a

review of the U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, publication: State Health



Workforce Profiles, updated every two years; reviewing national statistics to look at
Exhibit 57

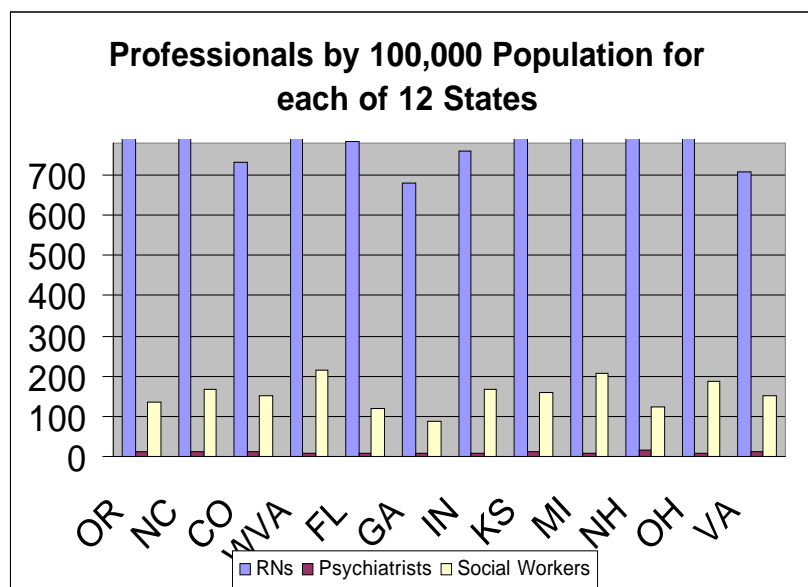
the percentage of MH/DD/SA utilization of professionals as a percentage of total state's available workforce; considering the extent to which the level of compensation for MH/DD/SA community staff are competitive in the marketplace through comparisons to average salaries of the public mental health workforce by type of position as reported by the United States Labor Bureau.



There were 854.4 nurses per 100,000 populations in North Carolina in 2000, compared to the national rate of 780.2 per 100,000. North Carolina had 2,650 nurse practitioners in 2000. This was equal to 32.7 nurse practitioners per 100,000 population, slightly below the national rate of 33.7. There were 824 psychiatrists, 2,940 psychologists, and 13,370 social workers in North Carolina in 2000. This was equal to 10.9 psychiatrists, 36.4 psychologists, and 165.4 social workers per 100,000 population. North Carolina ranked 20th among states in psychiatrists per capita, 22nd among states in psychologists per capita, and 25th among states in social workers per capita.

Exhibit 58

Low-quality mental health care is represented by poor diagnosis, poor treatment, and both under-and over-treatment. Possible reasons for poor care may be attributable to the fact that mental health and substance abuse disorders undermine a persons' ability to act as a rational economic decision maker; they often lack family who act as their health care



agents; they experience lack of knowledge about disorders and appropriate treatment; there is a social stigma; the organizational and financial characteristics of the health

care and insurance systems are limiting and principal-agent problems where people rely on players in the mental health care system to serve as “agents”. Providers face their own set of incentives, which may differ from the consumer’s. Focus on providers is important because they directly influence the quality of care as well as access.

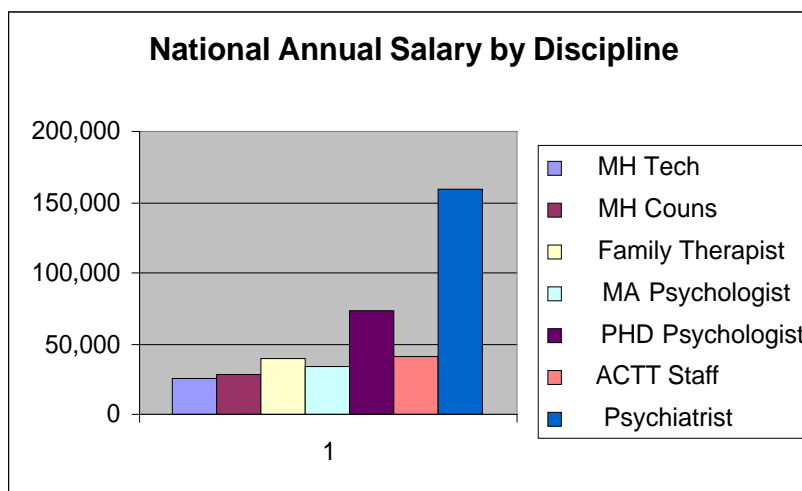
Reimbursement incentives tend to discourage QI efforts, even among the best-motivated professionals. To create proper incentives, health care quality through ‘value-based purchasing’ and ‘pay for performance’ as seen in improved clinical outcomes is critical. Designing an incentives program to improve mental health quality depends on the effectiveness of giving financial incentives to providers including how indicators are measured and risk-adjusted. Risk adjustment is particularly important when “incentivizing” outcomes to prevent “cream-skim” and “dump” behavior.

What type of financial incentive should be used? Models include bonuses, at-risk payment, performance fee schedules, quality grants, reimbursement for care planning, etc. It is best to pay on an overall outcome threshold vs. bonus per patient on an annual basis. To avoid perverse incentives, the standards cannot vary over time because frequent tinkering with the incentive plan destroys trust. The incentive should be large enough to be attractive but not so large that the system of care is jeopardized (5-10% of revenue). Financial incentives may not be plausible in a non-managed care program, but non-financial incentives can be implemented including public recognition of high-quality providers or a preferential referral system, reductions in administrative and regulatory burden, educational materials and/or training. There are other motivators for staff including annual performance increases, in-range salary adjustments, and recognition awards of up to \$1000 per year,

Exhibit 59

additional annual leave, training programs, increased employer retirement compensation, telecommuting, and educational assistance.

Salaries of the public mental health service system staff are predominantly non competitive in the marketplace. The availability of higher salaries through employment by private sector and other public agencies that provide mental health services presents a disincentive for the public mental health workforce recruitment and retention efforts. NC is no exception.



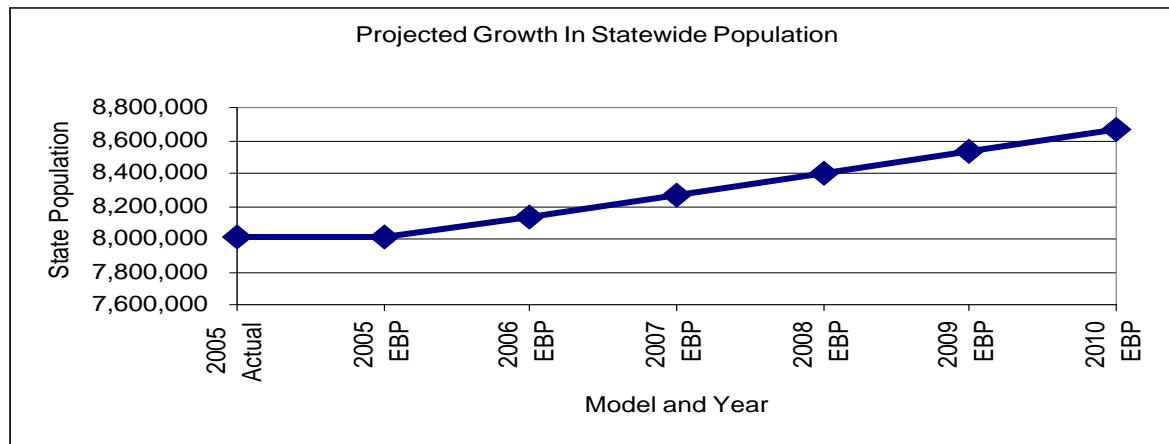
The most significant issue however is a culture shift from traditional modes of practice to EBP, recovery technologies, empowerment and resiliency strategies. Training and the involvement of consumers in training and as peer supports is critical. Traditional mental health staff (master degreed or more highly trained professionals) cannot provide the level of full support for all people who have a substance abuse or mental health disorder. Follow-up and outreach can be done by others who have experienced psychiatric disability, treatment, and recovery. Positive support can come from learning from people who are themselves in recovery. Skills for living in the community often can be best learned from people who have "been there." Consumers now drive Federal efforts to maximize consumer independence and health policy that promotes outcomes of recovery. NC and its LMEs and provider systems need to learn actions that promote recovery. Medications, hospitals, and programs have limited capacity to keep a person sane, stable, sober, and safe. Self-maintenance and self-monitoring are vital in helping people avoid relapse. People who experience these conditions are most successful when they are the agent of their recovery. People should be assisted in developing self-care principles, self-management, and peer support for recovery.

Total Funding Needed Based on Forecasted Changes 2005-2010

After calibrating the model to reflect actual costs in FY 2005 (called Actual 2005), the model was modified six more times and populated with values to gradually introduce a series of new services, or evidence-based practices (EBPs), as well as reflect increases in population, average cost per unit, as well as the total persons served annually (treated prevalence), the size of the average monthly caseload, and the ratio of the average monthly caseload to Total persons served (the continuity index). These models were labeled EBP 2005, EBP 2006, and so forth through EBP 2010. The goal was to determine the system-wide cost increases that would come with greater population and improvements in treated prevalence continuity of care and price inflation. These increases were applied to years 2006 and beyond and were not applied to EBP 2005 relative to the Actual Model's cost in 2005. The actual 2005 model and the EBP 2005 model differed only in the addition of EBP Services. EBP 2006 incorporates all system-wide increases, but reflects limited use of EBP as the year was nearly completed by the time service definitions were approved and services could be billed under those EBP codes.

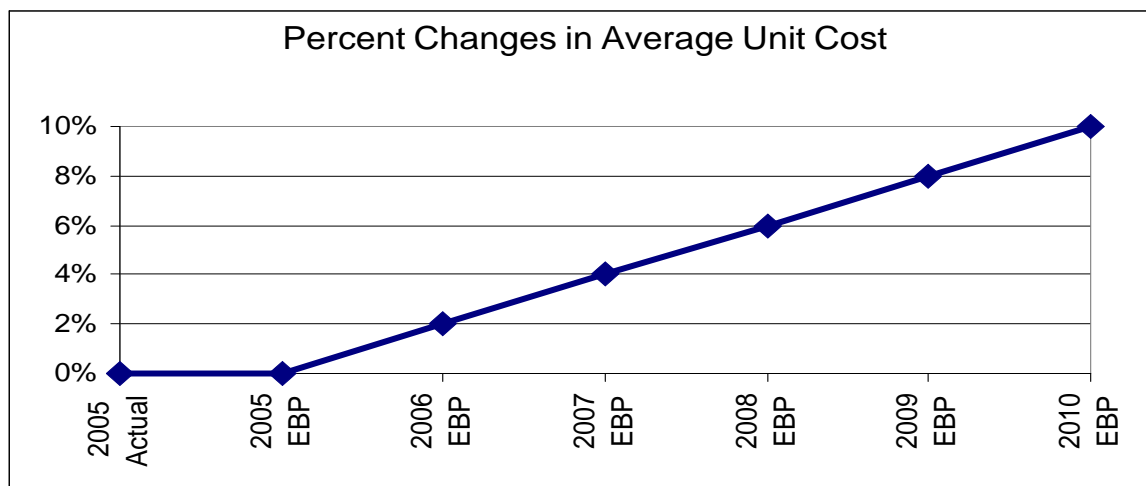
Population Growth - Based on NC population data we estimated a growth in population from 2005 to 2010 at an annual rate of approximately 1.5% per year. Exhibit 60 reflects these population growth assumptions used in the forecasting exercise.

Exhibit 60



2. Cost Per Unit of Service - Average cost per unit of service was assumed to increase an average of 2% per year, as reflected in Exhibit 61.

Exhibit 61



3. Annual Persons Served - The total persons served annually were assumed to increase each year as treated prevalence is increased as shown in Exhibits 67 and 68 below comparing the models.

4. Average Monthly Caseloads - The average monthly caseload was also assumed to increase each year to increase continuity of care as reflected in Exhibits 67 and 68 below that compare all the models..

The collective impact of these changes on total system-wide costs is reflected in Exhibits 62-67 that follow. These Exhibits show the amount of additional dollars needed in the NC MH/DD/SA system to bring treated prevalence rates to the national average, to reduce institutional care, to increase continuity of care and implement new evidence based practice, to sustain population growth and the economic increases the system is

currently facing. The net effect is \$2,691,559,397 over a five year period: the difference between Actual Costs in 2005 of \$1,960,371,957 and the EBP Model in 2010 of \$4,651,931,354. This is an average additional cost of \$538,311,879 each of the 5 years, FY2006 - FY2010.

Actual State Facility costs in 2005 were \$561,598,799. They are projected to be no greater than \$521,784,363 in 2010. The rate of deinstitutionalization utilized in the EBP Model is very conservative assuming a 5% reduction for persons with Developmental Disabilities and, a 7.4% reduction for persons with SA disorders, a reduction of 2% for children with SED and a reduction of 5% for persons with mental illnesses. In addition, the savings in State Facility care will not be available to purchase community based services on a dollar for dollar basis because of the variable rate issues involved in maintaining facilities and staffing standards. To truly see a big impact, entire units or facilities need to be closed. Savings from State Facility decreases are not realized because they are offset by other increases like population growth and CPI. Examining cost on a per capita basis, which adjusts for population growth but not inflation we can note an immediate reduction in FY2006 and 2007 from FY 2005 (\$5.84 to \$5.24 to \$5.08), which then gains in per capita each year. Reductions in State Facility use can only reach meaningful levels with substantial reductions in census because most expenses in State Facilities are fixed costs that do not go down when the census decreases by small amounts. The State needs a reasonably aggressive rate of State Facility downsizing to outpace population growth and inflation, and allow for the wholesale closing of entire units within facilities, or the entire facility.

Using estimates of State Facility reductions and new Medicaid enrollees, the state could offset some of the new dollars needed annually. State Facility clients discharged would account for \$2,563,478 Federal share dollars (555 discharged clients X \$7,217 cost per case for community based care X the 64% Federal share). Since we know all of those discharged will not be Medicaid eligible we could assume 40% for an increase of \$1,025,391.

If all non Medicaid clients were charged an ability to pay for service based on actual and projected data from 2005-2010 and only 7% was recouped, the state would have, based on actual data from 2005 to 2010 \$394,320,808. This, of course, is a simple projection, but one based on experience in the field. To do this the State would need to establish a statewide ability to pay fee schedule and see that it is implemented at the LME level. In fact, the allocation model could be modified to "squeeze" the LME for an appropriate collection of first party revenue based upon the ability to pay fee schedule.

The Federal contribution from new Medicaid clients can be calculated for new persons served and applied as a reduction of total state dollars needed each year. This would be even greater if NC was more aggressive in pursuing entitlements for potentially eligible clients. The current estimate would be 12,000 new Medicaid consumers times the applicable annual cost per client times the Federal portion of 64% is equal to approximately \$77 million. This projection can also be applied in the allocation model to

“squeeze” the LME in assisting persons with Medicaid enrollment so that the entitlement may be applied leaving fewer State dollars needed.

When one calculates potential new sources of revenue, the State obligation over the five year period could be reduced to \$219,430,862 or \$43,886,172 per year. If the Defined Benefit Model were utilized the reduction could be greater resulting in \$29,809,687 per year in necessary new state funds.

Exhibit 62

Federal Share State Facility Dollars Transfer to Community	\$1,025,391.
Ability to Pay	\$394,320,808
Federal Share of Community Service to New Medicaid Clients	\$77,391,769
Total	\$472,737,968
Dollars needed	\$2,691,559,397
Difference	\$2,218,821,429
Defined Benefit Plan	\$70,382,427
Difference	\$2,148,439,002

It is important to recognize that the State, in order to accomplish system changes for prevalence increases, EBP, and price increases, must first build systems for services and supports that promote an appropriate level of care. Then, through hospital reductions and the onset of services provided to those persons exiting State Facilities and eligible for Medicaid, the amount of net State funds required each year will be reduced. However if the State does not downsize hospitals as part of the process and create a system for control of state facility admissions (or payment for admissions) those with potential “principal agent” conflicts will continue to fill beds and the costs will grow even greater. The State must implement an Ability-To-Pay schedule and enforce it with LME Contractual expectations.

Exhibit 63 shows detail from each year of the EBP model for Community Based Services. Exhibit 64 is the EBP by year data for State Facilities and Exhibit 65 shows global budget allocations for Guardianship services and Peer operated services. Data from the three exhibits is then summarized in Exhibit 66 for the total system costs by

year and disability group. Exhibit 67 shows the breakout of Medicaid and non-Medicaid services.

Exhibit 63 Community-Based Services

Community-Based Services Only										
	By Disability	Base Population Adjusted by Share of Total Cost	Total Annual Caseload	Average Monthly Caseload	Persons Served Annually as A Percentage of Population	Total Monthly Cost for Community-Based Services for This Cohort	Annual Cost for Community-Based Services for This Cohort	Average Monthly Cost per Case	Average Annual Cost per Case	Annual Cost on a Per Capita per Month Basis
2005	DD	8,007,147	28,902	20,393	0.36%	\$54,516,951	\$654,203,412	\$2,673	\$22,635	\$6.81
Actual	SA	8,007,147	40,061	9,434	0.50%	\$4,628,427	\$55,541,129	\$491	\$1,386	\$0.58
	MH	8,007,147	218,394	81,284	2.73%	\$56,869,673	\$682,436,078	\$700	\$3,125	\$7.10
	Total	8,007,147	287,357	111,111	3.59%	\$116,015,052	\$1,392,180,620	\$1,044	\$4,845	\$14.49
2006	DD	8,138,219	29,191	20,495	0.36%	\$60,533,282	\$726,399,390	\$2,954	\$24,884	\$7.44
	SA	8,138,219	42,264	10,849	0.52%	\$8,297,675	\$99,572,103	\$765	\$2,356	\$1.02
	MH	8,138,219	222,622	104,044	2.74%	\$77,731,031	\$932,772,371	\$747	\$4,190	\$9.55
	Total	8,138,219	294,078	135,387	3.61%	\$146,561,989	\$1,758,743,865	\$1,083	\$5,981	\$18.01
2007	DD	8,269,290	29,336	20,597	0.35%	\$63,708,646	\$764,503,746	\$3,093	\$26,061	\$7.70
	SA	8,269,290	44,675	11,698	0.54%	\$9,158,169	\$109,898,027	\$783	\$2,460	\$1.11
	MH	8,269,290	227,163	128,429	2.75%	\$108,500,609	\$1,302,007,303	\$845	\$5,732	\$13.12
	Total	8,269,290	301,174	160,724	3.64%	\$181,367,423	\$2,176,409,075	\$1,128	\$7,226	\$21.93
2008	DD	8,400,362	29,480	20,648	0.35%	\$64,741,338	\$776,896,058	\$3,136	\$26,353	\$7.71
	SA	8,400,362	44,468	11,698	0.53%	\$9,764,615	\$117,175,379	\$835	\$2,635	\$1.16
	MH	8,400,362	224,711	139,809	2.68%	\$117,519,052	\$1,410,228,628	\$841	\$6,276	\$13.99
	Total	8,400,362	298,659	172,154	3.56%	\$192,025,005	\$2,304,300,065	\$1,115	\$7,715	\$22.86
2009	DD	8,531,433	29,625	20,801	0.35%	\$67,230,111	\$806,761,330	\$3,232	\$27,233	\$7.88
	SA	8,531,433	46,225	12,264	0.54%	\$11,296,501	\$135,558,012	\$921	\$2,933	\$1.32
	MH	8,531,433	226,060	154,440	2.65%	\$205,929,175	\$2,471,150,104	\$1,333	\$10,931	\$24.14
	Total	8,531,433	301,909	187,504	3.54%	\$284,455,787	\$3,413,469,445	\$1,517	\$11,306	\$33.34
2010	DD	8,662,505	29,691	21,208	0.34%	\$68,408,140	\$820,897,678	\$3,226	\$27,648	\$7.90
	SA	8,662,505	47,764	13,679	0.55%	\$14,383,369	\$172,600,429	\$1,051	\$3,614	\$1.66
	MH	8,662,505	229,676	182,077	2.65%	\$260,633,810	\$3,127,605,722	\$1,431	\$13,617	\$30.09
	Total	8,662,505	307,131	216,964	3.55%	\$343,425,319	\$4,121,103,830	\$1,583	\$13,418	\$39.65

Exhibit 64

Facility-Based Services										
	By Disability	Base Population Adjusted by Share of Total Cost	Total Annual Caseload	Average Monthly Caseload	Persons Served Annually as A Percentage of Population	Total Monthly Cost for Community-Based Services for This Cohort	Annual Cost for Community-Based Services for This Cohort	Average Monthly Cost per Case	Average Annual Cost per Case	Annual Cost on a Per Capita per Month Basis
2005	DD	8,007,147	1,948	1,729	0.02%	\$21,627,896	\$259,534,747	\$12,506	\$133,231	\$2.70
Actual	SA	8,007,147	5,979	202	0.07%	\$3,118,838	\$37,426,056	\$15,448	\$6,260	\$0.39
	MH	8,007,147	1,290	1,290	0.02%	\$22,053,166	\$264,637,996	\$17,097	\$205,165	\$2.75
	Total	8,007,147	9,217	3,221	0.12%	\$46,799,900	\$561,598,799	\$14,529	\$60,932	\$5.84
2006	DD	8,138,219	1,931	1,712	0.02%	\$17,134,505	\$205,614,066	\$10,008	\$106,469	\$2.11
	SA	8,138,219	5,761	202	0.07%	\$3,634,969	\$43,619,631	\$18,028	\$7,571	\$0.45
	MH	8,138,219	11,414	1,271	0.14%	\$21,854,523	\$262,254,278	\$17,201	\$22,977	\$2.69
	Total	8,138,219	19,107	3,184	0.23%	\$42,623,998	\$511,487,975	\$13,386	\$26,770	\$5.24
2007	DD	8,269,290	1,914	1,695	0.02%	\$17,305,990	\$207,671,878	\$10,212	\$108,478	\$2.09
	SA	8,269,290	5,568	188	0.07%	\$3,446,927	\$41,363,120	\$18,359	\$7,429	\$0.42
	MH	8,269,290	11,414	1,212	0.14%	\$21,258,411	\$255,100,934	\$17,533	\$22,350	\$2.57
	Total	8,269,290	18,896	3,095	0.23%	\$42,011,328	\$504,135,931	\$13,574	\$26,679	\$5.08
2008	DD	8,400,362	1,901	1,677	0.02%	\$17,447,664	\$209,371,968	\$10,401	\$110,139	\$2.08
	SA	8,400,362	5,390	187	0.06%	\$3,490,539	\$41,886,470	\$18,671	\$7,772	\$0.42
	MH	8,400,362	11,414	1,219	0.14%	\$21,817,753	\$261,813,042	\$17,899	\$22,938	\$2.60
	Total	8,400,362	18,704	3,083	0.22%	\$42,755,957	\$513,071,481	\$13,867	\$27,430	\$5.09
2009	DD	8,531,433	1,940	1,695	0.02%	\$17,971,605	\$215,659,257	\$10,604	\$111,187	\$2.11
	SA	8,531,433	4,797	187	0.06%	\$3,556,398	\$42,676,781	\$19,023	\$8,896	\$0.42
	MH	8,531,433	11,414	1,212	0.13%	\$22,076,042	\$264,912,509	\$18,207	\$23,209	\$2.59
	Total	8,531,433	18,151	3,094	0.21%	\$43,604,046	\$523,248,547	\$14,092	\$28,828	\$5.11
2010	DD	8,662,505	1,864	1,643	0.02%	\$17,733,877	\$212,806,519	\$10,794	\$114,164	\$2.05
	SA	8,662,505	5,547	187	0.06%	\$3,622,258	\$43,467,092	\$19,376	\$7,836	\$0.42
	MH	8,662,505	11,414	1,193	0.13%	\$22,125,896	\$265,510,752	\$18,544	\$23,262	\$2.55
	Total	8,662,505	18,825	3,023	0.22%	\$43,482,030	\$521,784,363	\$14,384	\$27,717	\$5.02

Exhibit 65

Globally Allocated Services				
	Base Population Adjusted by Share of Total Cost	Total Monthly Cost for This Cohort	Annual Cost for This Cohort	Annual Cost on a Per Capita per Month Basis
SA	8,007,147	\$21,132	\$1,500,000	\$0.02
MH	8,007,147	\$307,139	\$3,697,513	\$0.04
Total	8,007,147	\$383,527	\$9,592,539	\$0.10
DD	8,138,219	\$54,046	\$4,395,026	\$0.05
SA	8,138,219	\$21,806	\$1,500,000	\$0.02
MH	8,138,219	\$306,123	\$3,697,513	\$0.04
Total	8,138,219	\$381,976	\$9,592,539	\$0.10
DD	8,269,290	\$52,797	\$4,395,026	\$0.04
SA	8,269,290	\$22,517	\$1,500,000	\$0.02
MH	8,269,290	\$305,944	\$3,697,513	\$0.04
Total	8,269,290	\$381,258	\$9,592,539	\$0.10
DD	8,400,362	\$53,268	\$4,395,026	\$0.04
SA	8,400,362	\$22,613	\$1,500,000	\$0.01
MH	8,400,362	\$299,791	\$3,697,513	\$0.04
Total	8,400,362	\$375,672	\$9,592,539	\$0.10
DD	8,531,433	\$52,719	\$4,395,026	\$0.04
SA	8,531,433	\$23,264	\$1,500,000	\$0.01
MH	8,531,433	\$297,545	\$3,697,513	\$0.04
Total	8,531,433	\$373,528	\$9,592,539	\$0.09
DD	8,662,505	\$53,110	\$4,395,026	\$0.04
SA	8,662,505	\$23,574	\$1,500,000	\$0.01
MH	8,662,505	\$295,985	\$3,148,136	\$0.03
Total	8,662,505	\$372,669	\$9,043,161	\$0.09

Exhibit 66
Total For All Services, Including Globally Allocated Services, and All Facilities

2005	DD	8,007,147		\$76,200,102	\$915,935,673			\$9.53
Actual	SA	8,007,147		\$7,823,855	\$95,164,698			\$0.99
	MH	8,007,147		\$79,340,372	\$949,271,587			\$9.88
	Total	8,007,147	Total Annual Costs for All Services for All	\$163,364,330	\$1,960,371,957			\$20.40
2006	DD	8,138,219		\$77,722,321	\$936,408,482			\$9.59
	SA	8,138,219		\$11,954,430	\$144,691,734			\$1.48
	MH	8,138,219		\$99,891,376	\$1,198,724,162			\$12.27
	Total	8,138,219	Total Annual Costs for All Services for All	\$189,568,127	\$2,279,824,378			\$23.34
2007	DD	8,269,290		\$81,068,147	\$976,570,649			\$9.84
	SA	8,269,290		\$12,627,581	\$152,761,146			\$1.54
	MH	8,269,290		\$130,064,523	\$1,560,805,750			\$15.73
	Total	8,269,290	Total Annual Costs for All Services for All	\$223,760,250	\$2,690,137,546			\$27.11
2008	DD	8,400,362		\$82,243,230	\$990,663,052			\$9.83
	SA	8,400,362		\$13,277,723	\$160,561,849			\$1.59
	MH	8,400,362		\$139,636,016	\$1,675,739,183			\$16.62
	Total	8,400,362	Total Annual Costs for All Services for All	\$235,156,970	\$2,826,964,084			\$28.04
2009	DD	8,531,433		\$85,255,623	\$1,026,815,613			\$10.03
	SA	8,531,433		\$14,876,108	\$179,734,793			\$1.76
	MH	8,531,433		\$228,302,051	\$2,739,760,125			\$26.76
	Total	8,531,433	Total Annual Costs for All Services for All	\$328,433,781	\$3,946,310,531			\$38.55
2010	DD	8,662,505		\$86,195,126	\$1,038,099,223			\$9.99
	SA	8,662,505		\$18,029,200	\$217,567,521			\$2.09
	MH	8,662,505		\$283,055,691	\$3,396,264,610			\$32.67
	Total	8,662,505	Total Annual Costs for All Services for All	\$387,280,018	\$4,651,931,354			\$44.75

Exhibit 67
Summary of Community Based Services and Services Allocated on a Global Budget By Funding Source

2005	Mediciad	1,158,063	161,285	71,885	13.93%	\$96,538,744	\$1,163,950,722	\$1,343	\$7,217	\$83.76
Actual	IPRS	6,849,084	126,072	39,226	1.84%	\$19,476,308	\$234,822,436	\$497	\$1,863	\$2.86
	Total	8,007,147	287,357	111,111		\$116,015,052	\$1,398,773,159	\$1,044	\$4,868	\$14.56
2006	Mediciad	1,174,181	164,725	87,990	14.03%	\$98,281,127	\$1,185,806,063	\$1,117	\$7,199	\$84.16
	IPRS	6,964,038	129,352	47,397	1.86%	\$48,280,862	\$582,530,341	\$1,019	\$4,503	\$6.97
	Total	8,138,219	294,078	135,387		\$146,561,989	\$1,768,336,403	\$1,083	\$6,013	\$18.11
2007	Mediciad	1,190,299	168,262	104,980	14.14%	\$120,782,193	\$1,455,774,498	\$1,151	\$8,652	\$101.92
	IPRS	7,078,991	132,912	55,744	1.88%	\$60,585,230	\$730,227,116	\$1,087	\$5,494	\$8.60
	Total	8,269,290	301,174	160,724		\$181,367,423	\$2,186,001,614	\$1,128	\$7,258	\$22.03
2008	Mediciad	1,206,417	167,267	112,755	13.86%	\$126,173,109	\$1,520,380,241	\$1,119	\$9,090	\$105.02
	IPRS	7,193,945	131,392	59,399	1.83%	\$65,851,896	\$793,512,362	\$1,109	\$6,039	\$9.19
	Total	8,400,362	298,659	172,154		\$192,025,005	\$2,313,892,603	\$1,115	\$7,748	\$22.95
2009	Mediciad	1,222,535	168,817	123,029	13.81%	\$142,561,757	\$1,715,548,611	\$1,159	\$10,162	\$116.94
	IPRS	7,308,899	133,092	64,475	1.82%	\$141,894,030	\$1,707,513,373	\$2,201	\$12,830	\$19.47
	Total	8,531,433	301,909	187,504		\$284,455,787	\$3,423,061,984	\$1,517	\$11,338	\$33.44
2010	Mediciad	1,238,652	171,542	142,646	13.85%	\$184,089,583	\$2,213,922,487	\$1,291	\$12,906	\$148.95
	IPRS	7,423,852	135,590	74,318	1.83%	\$159,335,736	\$1,916,224,504	\$2,144	\$14,133	\$21.51
	Total	8,662,505	307,131	216,964		\$343,425,319	\$4,130,146,991	\$1,583	\$13,447	\$39.73

Interrelationships of Cost Variables

Since population is also increasing each year, we calculated costs as an average monthly cost per capita, (i.e. per citizen in the population. In addition to increasing costs for community-based services, we examined the impact of assumed increases in treated prevalence among categories of consumers with especially low treated prevalence and in counties with below average rates of treated prevalence. These increases in treated prevalence were limited to affordable levels while maintaining reasonable continuity, (recall that increasing prevalence without increasing average monthly caseload will result in a reduction in continuity for those being served). There were only slight projected increases in the treated prevalence of developmental disabilities and SED to maintain them at their current level given population increases, and stronger increases in the rate for SA and Adult SMI.

Improvements in continuity must also be gained at the same time one is increasing treated prevalence. Based on assumed increases in both total persons served annually and the average monthly caseload, we introduced major gains in continuity over the initial draft of this Analysis. This has the effect of increasing costs dramatically.

As population increases, we forecasted a relatively greater use of EBP services, an increase in treated prevalence, to bring NC up to the national average, while realizing major gains in average continuity of care.

Benefit Model

The Defined Benefit Model is intended to estimate costs for those non-Medicaid eligible persons that require services from the public system. Only 14% of the recipients are insured by Medicaid. The State desires keeping EBPs for this group to maintain a smooth transition for the consumer to Medicaid services (if and when eligible) and to offer a benefit as close to the Medicaid benefit as possible to facilitate good quality care and prevent State Facility use. The more usual ways that benefits are reduced to save are to reduce the number of different services offered (i.e. reduce scope of benefits), or to reduce the total amount of service that an eligible person can receive. None of these appeared to be acceptable alternatives in our discussions with the Division leadership staffs.

That decision essentially leaves the only other alternative, which is to alter the requirements for eligibility for services. The State has established "Target Populations" to be served. In examining the treated prevalence data by county, it is apparent that many LMEs are serving people who may not meet these Target Population criteria because their rate of treated prevalence is too high. What that means is the LME is serving people with mental health problems, and not just those with the most severe conditions. By evaluating each county's treated prevalence and reducing the treated prevalence in counties that were outliers we were able to establish a basis for significant

savings. This mechanism has the effect of lowering the overall treated prevalence rate in the State, but it does ensure that services are delivered to those “most in need”, one of the policy principles agreed to by the parties.

Following is the comparison of differences between the FY 2005 EBP Model and the Defined Benefit Model for the “IPRS” or non-Medicaid population. The numbers of persons served were adjusted within any county that had a treated prevalence rate more than 10% higher than the State average. To maintain the current level of spending for non-Medicaid services, funding it will be critical to monitor treated prevalence rates by county and to create stricter Target Population criteria and diagnostic requirements. For example, in Mental Health, which comprises the largest group, the State could require a previous hospitalization. However, the State would not want to do so in the case of someone experiencing an initial acute schizophrenic episode. The diagnosis must be considered as well. This will mean that the method of recording diagnoses cannot continue as it is now. Diagnoses must be made carefully and accurately and entered before claims can be processed. This information will give the State other data that may be helpful in future analyses.

Exhibit 70 below demonstrates that under the Defined Benefit Plan the State will be serving fewer people. The average monthly caseloads will be smaller. The Plan costs the State close to \$16 million more than the 2005 Actual Model, but almost \$6.5 million less annually for community services than the EBP Model so will therefore save even more over the 5 year period. The cost per case for mental health services (where most of the reductions occurred) is lower because the Model was limited to encourage application for entitlements within a 90 day window. The annual per capita is greater than the Actual Model but less than the EBP Model. Many people seen will be for assessment only.

Those individuals not receiving care in this plan are people with mental health “problems” but not severe or serious mental illnesses. Taking a position that these individuals cannot be served will be especially difficult in those communities that have come to expect the welcoming, “open-door” policy of many LMEs. Unless the State Legislature and Executive branches have the political will serve these individuals and to provide the needed revenue, this reduction in persons to be served seems like the least harmful and clinically most appropriate approach to designing a Defined Benefit Plan. Another alternative is to re-consider reducing the scope of services to be provided, or the volume and intensity of services authorized for eligible persons if savings are not sufficient in this scenario.

Exhibit 70

Comparison Defined Benefit Model 2005, EBP Model 2005 & Actual Model 2005

Model	By Disability	Base Population Adjusted by Share of Total Cost	Total Annual Caseload	Average Monthly Caseload	Persons Served Annually as A Percentage of Population	Total Monthly Cost for Community-Based Services for This Cohort	Annual Cost for Community-Based Services for This Cohort	Average Monthly Cost per Case	Average Annual Cost per Case	Annual Cost on a Per Capita per Month Basis
Actual Model 2005	Total	6,849,084	126,072	39,226	1.84%	\$19,476,308	\$234,822,436	\$497	\$1,863	\$2.86
Defined Benefit Model 2005	Total	6,849,084	115,406	32,889	1.68%	\$34,962,407	\$429,141,417	\$1,063	\$3,719	\$5.22
EBP Model 2005	Total	6,849,084	126,072	39,226	1.84%	\$41,379,851	\$499,523,844	\$1,055	\$3,962	\$6.08
Net Differences Actual less Defined			10,666	6,337	0.24%	(\$15,486,099)	(\$194,318,981)	(\$566)	\$1856	(\$3)
Net Differences EBP less Defined			10,666	6,337	0.24%	\$6,417,444	\$70,382,427	(\$8)	\$243	\$86

Projected Start-up Costs

Projected start-up costs and total funding needed are outlined in the tables below. Funds available through the Trust Fund should be for implementation of EBP. It is strongly recommended that there be a specific process and procedure for making these EBP funding requests to insure fidelity to standards. In addition the State should closely follow the implementation to ensure it meets fidelity standards for the particular practice. In most instances, a supervisory position should be purchased either for the LME or region that will receive training in the practice and implementation of the program. Subsequently three to six months operating cost should be used as start up funding depending on the scope of the program. The existing EBP Models provide estimates of monthly and annual costs to be used for funding the program for three months of start-up. When EBP is not implemented based on the research parameters and criteria, it will not have the intended effect and will, in most circumstances, not work well. A classic example of this is the way ACTT programs are working throughout NC at present. In many areas of the State, consumers are not being provided the level of care and staffing expertise required under the model.

A document authored by Pareto Solutions and Heart of the Matter to provide technical assistance to members of the National Association of State Mental Health Program Directors on planning for and budgeting evidence-based programs (EBPs) for mental health and substance abuse treatment incorporates an illustrative model. Since EBPs are new to State budgets there is little budgetary history to guide budget forecasts. Instead, the State needs a mathematical model of start up and operating costs for a given population basis (e.g. 100,000 – 200,000 persons) Since most EBP research does not provide clear cost estimates for replicating programs, the State has to develop its own budget estimates based on staffing, equipment, space and other expenses. Furthermore, any cost estimates may vary within a large state due to regional differences in such factors as the cost of space, salaries, and other start-up and on-going operational expenses. The paper explains the benefits of a formal and comprehensive model that addresses both variability and uncertainty in the monitoring, planning, budgeting and quality improvement of EBPs within systems of care.

Exhibit 71 shows services in the EBP model and the total amount of dollars for increased or new services relative to the FY2005 actual costs. Some services are included that are not EBP but necessary until they can either be phased out (e.g. Community Rehabilitation programs that substitute for competitive employment and community integration) or utilized only as a last alternative in the array of service, such as “residential care”. Other services listed are those that were discontinued when new service definitions were introduced this past year and the dollars have been reallocated in the Model.

Exhibit 71

Service Listing and Costs Start-up or Bridge Funding

	Service	2005 Actual	EBP 2005 Model	Differences
✱	Assertive Outreach	\$1,823,204	\$732,410	\$1,090,794
✱	Assertive Community Treatment (ACTT)	\$17,956,275	\$67,813,777	\$49,857,502
✱	Assessment	\$17,363,418	20,727,339.35	\$3,363,921
	Case Management & Case Support	\$133,131,321		\$133,131,321
	Community Based Services	\$240,262,886	\$0	\$240,262,886
✱	Community Detoxification	\$545,921	\$4,459,353	\$3,913,432
✱	Community Emergency Services & Mobile Crisis	\$6,532,539	\$45,709,100	\$39,176,561
✱	Community Inpatient	\$53,798,091	\$42,045,184	\$11,752,907
	Community Rehabilitation Program	\$25,031,535	\$22,461,576	\$2,569,959
	Community Support		\$22,056,437	\$22,056,437
	Community Support Team		\$9,491,966	\$9,491,966
	Day Habilitation /Supports	\$72,380,287	\$50,504,218	\$21,876,069
	Developmental Therapies	\$0	\$24,865,200	\$24,865,200
	Drop-In	\$437,213	0	\$437,213
✱	Facility Based Crisis Service	\$10,973,899	\$47,061,007	\$36,087,108
✱	Guardianship	\$350,695	\$350,695	\$0
✱	Housing Supports		\$26,399,395	\$26,399,395
	Intermediate Care Community	\$197,011,629	\$194,413,325	\$2,598,304
✱	Intensive In-Home Services	\$0	\$391,059,581	\$391,059,581
✱	Multi-systemic Therapy	\$0	\$24,933,029	\$24,933,029
	Medication Administration	\$4,336,746	\$4,331,951	\$4,795
	Outpatient	\$69,193,487	\$42,312,106	\$26,881,381
	Outpatient MD	\$21,589,985	\$23,216,140	\$1,626,155
✱	Products	\$5,296,669	\$19,900,254	\$14,603,585
	Personal Care & Personal Assistance	\$54,096,573	\$52,267,330	\$1,829,243
	Partial Hospitalization	\$0	\$1,158,732	\$1,158,732
	Psychosocial Rehabilitation	\$15,448,463	\$12,160,858	\$3,287,605
	Supported Independent Living	\$97,651,980	\$0	\$97,651,980
	Residential Treatment	\$278,767,437	\$196,108,424	\$82,659,013
	Respite	\$19,822,742	\$32,530,660	\$12,707,918
	Social Inclusion	\$451,627	\$0	\$451,627
✱	Supported Employment	\$54,422,536	\$109,954,295	\$55,531,759
	Targeted Case Management	\$0	\$104,966,161	\$104,966,161
✱	Indicated & Selective Prevention	\$0	\$43,178	\$43,178
✱	Day Care Integration	\$0		\$0
✱	Peer Supports	\$0	\$3,000,000	\$3,000,000
	Comprehensive Substance Abuse			
	Outpatient Treatment	\$0	\$12,467,404	\$12,467,404
✱	Illness Management & Recovery			

※				
※	Parent Management Training			
※				
※	Family Support			
※				
※	Family Psycho-education			
	Net Value	\$1,351,556,852	\$1,691,648,135	\$340,091,283

Services asterisked fall into three categories.

※※※ Those services requiring statewide implementation as rapidly as possible to support the systems of care

※※ Those services that may be developed and integrated with other services with dollars utilized for training and dissemination. In addition many of these services may be used as a powerful initial introduction and interim service for new consumers entering the system and their families. People are likely to progress faster in treatment programs when they are armed with information and skills to actively and responsibly participate in the treatment process. Day Care Integration is a consultation service aimed at helping children with disabilities and SED stay in the integrated day care setting. These are all research based programs. Peer Supports is also critical to introduce a culture of Recovery and support for consumer empowerment.

※ Those services important for the practice of evidence based care that should be increased statewide and in many instances may be shared. “products” includes significant dollars to be used for flexible funding for children and family system of care expenses as well as for augmenting housing by making available initial assistance with deposits, etc to establish a home. Trust Fund and Expansion dollars should be utilized for these purposes; and in most cases are earmarked as such in the appropriations bill.

The NC Psychiatric Association Report, the NAMI report "Grading the States: A Report on America's Health Care System for Serious Mental Illness", and the 2000 State Auditor's Report reveal that North Carolina's per capita expenditures on mental health have not kept up with inflation, with a 38% decline in constant, inflation-adjusted, dollars from 1990 to 2002, that ranked the State 49th in the country. The March, 2006 NAMI Report identifies funding as an "emergency" in North Carolina. The report points out that to bring North Carolina to 88.8% of the national average per-capita level of spending, would require \$285.5 million more than the State spent in FY 02-03. The National Cerebral Palsy Association (NCPA) urges the NC General Assembly and the Governor to address this emergency in North Carolina's Mental Health System as an urgent priority.

Such a transformation also requires an increase in Division monitoring and technical assistance which cannot be effectively pursued with current levels of staff.

Transferring funds from the State Hospitals alone will not be sufficient to meet the need. There are number of financial positions and policy decisions the State could pursue that would help meet this huge gap in funding. These mechanisms and others will be discussed further in a second project that is currently underway.

The State is faced with a difficulty shared by other states, and that is the Medicaid benefit is frequently augmented with other funding. This often has the effect of making a "rich" benefit, "richer" and takes from the pool of resources needed to support the non-Medicaid population. Many of these augmentative services are not evidence-based practices and yet there is considerable political pressure to hang on to them. Again this model will allow the State to examine those factors and present factual data to persons with authority to make these benefit design decisions.

The State of NC is faced with a historical funding base that is not equitably distributed leaving some counties with greater need relatively under funded. Services cannot be equitably applied statewide as long as this allocation process continues. This model can allow the State to examine the current reality of service availability as well as utilization across counties, LMEs or larger regions. The equitable funding project underway will also help to resolve this issue.

States that allow significant consumer choice face higher costs than those who do not. When consumers are allowed a choice of provider, over-utilization problems are typical. Furthermore, the State must help to underwrite the cost of excess capacity in order to make multiple service providers available in a multi-choice environment. Another important source of utilization and cost variation can be traced to the State's requirements for unique or specialized services for individual users. The more customized features that are required and provided, the higher the cost of the overall system. This risk has been addressed in general health care systems by trying to reduce treatment variations that are based on providers' or patients' individual preferences, rather than their demonstrated effects on treatment outcomes. Based on system principles we are not advocating eliminating choice in this environment but the

model will allow for placing restrictions or caps on certain services to allow the State the opportunity to see the effects of a number of scenarios. The State may want to pursue a Freedom of Choice Waiver to limit the number of providers.

The State has a fluctuating base of financial support. Highly categorical sources of funding that can not be readily blended or braided make the equitable standardization of a system nearly impossible. The State has significant funding that can only be expended for specific populations or for designated services. These categorical funding streams must be allocated to the right services and eligible consumers. Creating a service system with a single stream funding would be much easier to manage. The “designated funds” method also promotes artificial spending to avoid lapse. This phenomenon then supports artificial utilization which ultimately creates a sense of entitlement where one does not exist.

NC has an opportunity to align finances, quality, and care management in a single structure. It is imperative that the way LMEs are funded and are required and/or allowed to fund services are sufficiently flexible to allow creativity, yet are sufficiently aligned with the overall system’s clinical and quality outcome goals to assure that incentives to perform are present. In order to utilize regional structures to create organized systems of care, it is almost a necessity to seek a Medicaid waiver to allow limitations on who can be providers, to allow services to grow differently in different regions, and to pay for services with mechanisms that allow incentives for efficiency as well as good clinical and consumer outcomes. While a Medicaid State Plan amendment would be an approach to consider for adult mental health services, an actual waiver would probably be necessary for children’s services. The State may want to explore the possibility of a relatively straightforward 1915 (b) waiver to allow these regional structures to be funded with Medicaid dollars and to have these structures manage the provider network and the service delivery process.

The state must implement a single “State-wide Ability to Pay” schedule and require its enforcement. It is also imperative that the State consider an option for the State’s working poor to “Buy-in” to the Medicaid program.

NC may be underutilizing Medicaid to finance community mental health services. Maryland’s system, which is set up to ensure that Medicaid is billed before a person can receive uninsured services financed by State resources, has resulted in a relatively low percentage of consumers served in the non-Medicaid program.

Residential care is provided without charging the individual/family for room and board out of other resources such as SSI payments that are paid to families for this purpose.

There are no current incentives to either prevent admissions or to get people out of the hospital. The State needs to develop a process for placing the management and financing of consumer care solely with the LME. This course of action would give LMEs full financial and clinical responsibility and accountability for their citizens.

There must be willingness to act (or political will). This requires that state officials, stakeholders, politicians, and other systems all step up to the plate and act in concert to improve the system of care.

Chapter VI Conclusions & Recommendations

Foundations

While dedicated individuals may have the capacity to make small incremental improvements in the public mental health system, any significant transformation requires a major paradigm shift. The NC MH/DD/SA system does not currently have a culture, nor has the capacity that lends itself to maximization of resources and services to assure the most benefit is provided for eligible persons. These culture and capacity issues are evident in the system's lack of a consistent, coherent service philosophy, lack of policy with respect to self-pay, coordination of benefits, reluctance to limit the scope or volume of services and continued practices that support institutional care as a priority. The understanding and introduction of new service technologies that are Evidence Based Practices (EBPs) has also been left to individual providers or practitioners. The need to pay attention to the philosophy or culture of NC's service delivery system is critical. Inattention to these issues will result in increasing fragmentation of the system.

As the state of NC moves forward, it must do so with unwavering objectives that are based on consumer-recovery, empowerment and independence, and family resiliency. Strategies that include these goals should be articulated. The structure of public mental health services and systems (policies and service technologies) that provide guidance should all support these unified objectives.

In the broadest sense, **recovery is the manifestation of an individual's hope to move forward with his/her life despite the intrusion of a disability.** In a state system, understanding that recovery is an achievable goal for all persons with developmental disabilities, substance abuse and mental illness, provides a measure by which all who work in the system can judge their efforts. An understanding that recovery is possible is a reminder that services must not be static but should instead constitute a search for the best possible outcomes. A recovery vision challenges the system to achieve the best possible results for each individual. A shared vision of recovery is essential for system change and improvement.

Rules

In designing the "Ideal Model" for the NC MH/DD/SA system there must be consensus on certain basic policy. Implied policy exists but is not established in rule. Some policy is shared through "Communications Bulletins" and "State Plans". To implement a strong system the State must provide leadership with clear and enforceable policy parameters that are communicated through administrative rules and contracts. There are no administrative rules that clearly set enforceable policy at the local level to implement an EBP approach. There is a lack of local compliance regarding the Core Customer to be served using public mental health dollars. The State has no administrative rules that clearly set enforceable coordination of benefits policy at the local level so that private

insurance is not routinely billed before public dollars are expended and people that are not eligible for Medicaid are not assessed for their ability-to-pay and no effort is made to collect reimbursements.

The Division has initiated review of the administrative rules and should proceed to complete this process and draft new rules to accommodate the following:

- Equity
- Non-supplementation of Medicaid Benefit
- Definitions of urgency, severity & intensity including Levels of Care
- Outcomes and Performance Improvement
- Community & Natural Supports
- Standardized Assessment
- Jail/Juvenile Diversion
- Integrated Healthcare
- Family Support
- Prevention
- Discharge Planning and Alternative Care for State Facilities
- 1st & 3rd Party Charges and Coordination of Benefits
- Crisis Services
- Assisting people with entitlements
- Ability to Pay
- Room and Board Payment
- Define certain services such as Supported Employment and Housing
- Peer Support
- Single Entry Authority
- Required array of available services
- Treatment in residential settings
- Outreach and Continuity of care Responsibility
- Training
- Local Capacity Reporting
- Waiting Lists
- PCP and Self-Determination
- Least Restrictiveness
- Customer Service
- Layered Services
- Current rules and statutes are unclear as to the extent of authority and responsibility for psychiatric patients presenting in emergency rooms and LMEs and the result is over-utilization of emergency rooms, extended duration of time before consumers are seen or receive placement and utilization of practices that exacerbate the presenting problems or symptoms that may result in unnecessary use of restraints or restrictive interventions.
- Other Principles where a common definition is required

Information System

There are gaps in the information system infrastructure that impede the collection of data necessary for routine monitoring and analyses of the system.

The LME Contract needs performance indicators, a requirement for services capacity reporting, and reporting of all service units regardless of payer.

Benchmarks are not currently available for expected performance in some areas. Of particular importance are indicators measuring :

- New persons receiving a face-to-face assessment with a professional within 14 calendar days of a non-emergency request for service. (95%)
- New persons starting any needed on-going service within 14 days of a non-emergent assessment with a professional (95%)
- The percent of discharges from a psychiatric inpatient unit who are seen for follow-up care within seven days (95%)
- The percent of discharges from a substance abuse detoxification unit who are seen for follow-up care within seven days.(95%)

There is currently no statewide mechanism for LMEs or other primary service providers to know when persons in their care enter a crisis state or emergency services setting. This lack of information results in poorer care than desired, frequently hospitalization, and less care coordination.

Service Inadequacy

Services to adults and children with substance abuse and mental illnesses are insufficient in scope, and amount, and the service continuity and intensity is not sufficient to achieve expected outcomes, thereby increasing hospital and residential admissions unnecessarily, and sustaining resources in restrictive care that could be shifted to community-based services.

The service benefit for all adults, including substance abuse, mental health and developmental disabilities is primarily lacking community integration, housing, supported employment and self-determination and/or recovery options that can in part be accomplished through transitioning to more independent and inclusive practices eliminating “programs” and large institutional settings.

The array and amount of crisis services throughout the state are not adequate to meet the needs of most individuals in the population.

The Access Penetration rate for NC is 14.2 compared to the National average of 12.6, which is positive. The gap analysis found discrepancies among the scope of services, the extent to which services are being provided, and the continuity of treatment throughout the year and the intensity of treatments within episodes of care known to garner better long-term outcomes for persons with mental illnesses and substance abuse conditions.

- State policy decisions must be made regarding the type and scope of benefits and the level of care intended without bowing to pressures from groups with

“principle agent” conflicts. Non-effective programs that are non-Medicaid services must be phased out and new EBP implemented.

- NC is spending less and serving more people by providing very little continuity of care, making the limited service to any one person very episodic and ineffectual.
- The nature of outpatient care needs to change to accommodate SAMSHA models for psycho education, parent training, etc. Outpatient treatment will be less site-based and provided more often in settings such as the home for children and those in crises.
- The system needs to introduce methodology to more successfully engage consumers in their individual recovery plan, especially those in rural areas and people over 65.
- The system is growing haphazardly in a free market kind of way without planned attempts to assure services are available and adequate throughout all parts of the State. Discrepancies, discontinuities, and inequities are exacerbated by the fact any provider that is able to meet standards can provide care and bill for services.
- Local LMEs are not in a position to coordinate and manage services through a preferred network, thereby presiding over a fragmented system design that does not allow for capacity/efficiency analyses or for good coordination of care.
- While the community services provided by NC's LMEs reach a significant percentage of NC's population in comparison to other states, they do not serve people with SA problems or those living in rural areas with mental health needs as well as they serve urban persons. Clients living in densely populated areas are receiving many more EBP services than clients living in rural, less dense areas.
- The NC system is serving more people in hospital and institutional settings than the national average, fewer in specialty services, and far more than the average in traditional outpatient settings that are ineffective with the populations requiring services.
- The State should engage persons with SA problems in treatment earlier. Selective and Indicated Prevention should be provided to all children in the school setting before their first SA “experience”.
- There are few jail diversion projects or services that work to keep adults or children out of correctional institutions at the local level.
- Fifteen to 25 percent of older adults in the United States suffer from significant symptoms of mental illness, yet the Division of MH/DD/SA provided services to only 14,949 individuals over the age of 65.. The data show that NC is below the national average and the Southern Regional average for serving the elderly. NC has people in hospitals that need placements in the community pursuant to the Olmstead Act.

Population, Prevalence & Treated Prevalence

- The NC enrollment in Medicaid is below the national average and if the enrollment were increased, the uninsured number might reflect the national average.

- The States General Fund contribution for Medicaid is well below the National Average putting it 43rd in the nation. Those living below 100% of the Federal Poverty Level exceed the national average by 3%. This means that comparatively more people are potentially eligible for Medicaid.
- NC is above the national average in treated prevalence overall with the exception of substance abuse and a small amount in adult mental health.

Per Capita Spending

- NC's per capita spending on community-based mental health is one of the lowest in the nation at \$16.80. While levels of access to NC's MHDDSA community services is overall favorable and has shown increases with reform, NC spends less on a per-consumer basis for MH and SA services than most other states.
- NC is spending less on community-based services and more than most states on state facility-based services. This pattern is probably indicative of admitting people to State Facilities when first seen in the system versus intervening initially with other community-based alternatives, and using State facilities when all else has failed.
- Spending less and serving more equates to not providing an adequate level of continuity of care, which has a significant correlation with State Facility use. The continuity with which care is provided is critical.
- NC Needs to improve screening in the emergency room to identify alcohol or drug disorders and mental illness; strengthen linkages between the emergency room and the chemical dependency and mental health treatment systems to increase penetration rates, especially for alcohol or drug treatment

Service Utilization

The service amount and type meet national averages for persons with DD. The service array is adequate to implement best practice for persons with DD by phasing out ineffective "work" and day programs, large residential programs and implementing Supported Employment and Supported Housing. In the process the focus must be shifted to inclusion and integration. This will require extensive training and monitoring of direct care providers and staff.

The biggest problem in NC at this time is North Carolinians in need of Mental Health services do not receive an adequate intensity of care. As demand increases, intensity of services - as measured by number of visits - is declining

There is inequitable utilization of services across counties within NC. Services that are integrated and inclusive, rehabilitative, supportive or recovery oriented are underdeveloped. In-home, wrap-around, psychosocial rehabilitation, supported housing, employment services, mobile crisis, intensive or assertive community treatment (ACT) and peer-operated alternatives are either unavailable or under-utilized in many parts of the State.

The level of care or intensity of service in each program is not sufficient and therefore not meeting model fidelity standards.

NC needs to consider the Independence Plus Waiver and a Medicaid Buy-In to implement increased levels of employment.

People are often admitted to State Facilities in NC without earlier consideration of community-based alternatives.

- There is no single point of entry into state facilities that would ensure uniform screening, care management to implement alternative care and responsibility for payment of State services when community alternatives are not available or are not adequate to serve the consumer.
- Decision-making on State Facility use is in the hands of persons that have other interests at stake; such as maintaining a population base to preserve jobs, or getting people out of their emergency rooms.
- Community Inpatient staff are sending people to State Facilities without the LME having a chance to offer an alternative plan.
- State Hospital care is often provided as a first option rather than a last resort. State Hospitals fill the void of community-based crisis.
- A concerted effort to understand how state hospitals could be used less and what services are necessary to support state hospital consumers in the community will free resources to expand community services.
- People with substance abuse problems constitute the primary reason for increased numbers of admissions to the State hospitals and more emphasis must be placed on the development of local detoxification facilities. The data submitted to TEDS and State claims data do not agree in terms of the number of people with SA admitted to state facilities. This is probably due to the way diagnoses are entered in the data system. This needs to be examined closely.

The array and amount of crisis services throughout the state are not adequate to meet the needs of most individuals in the population. Not all areas of the state require the same type of crisis service. Facility-based Crisis Centers are not appropriate for the rural population in NC. NC is overusing inpatient resources to the detriment of its ability to provide community services. Facility-based crisis services should be required to have a community detoxification component.

- Transition planning for the consumer's post-discharge care must be a requirement for the use of emergency services.

Housing and supportive living arrangements for adults are not widely available throughout NC.

The State has not used peer supports or consumer-owned or operated programs. These efforts have been found to reduce the cost of care, but more importantly to result in a consumer's development of a sense of empowerment that leads to their recovery. Initiating these types of programs will further the culture of recovery

NC should examine the Screening, Triage, and Referral function to ensure that only individuals who meet "target population" criteria are being admitted and LMEs are consistently applying state definitions of target populations.

A single point of regional accountability for consumer care and system resources (regional structures) is needed to reestablish responsibility and accountability for consumer care and for managing limited resources for both adults and children.

Projected Start-up & Total Funding Needed

Alone, Best Practices might be impossible for the State to fund. However, coupled with an incentive base to limit state hospital use by providing sufficient community based services and recognizing the fact that many of the community based services would result in increased Federal share as best practices were increased in the community, the State's cost could be reduced significantly.

New Services

At this point it isn't possible to know with any certainty which services an LME has or doesn't have. There is no comprehensive report of service capacity or mechanisms to define capacity. This is necessary to right size the system and confounded by the "scattering or burgeoning" of private providers that are not a part of the care system. Without this information on capacity it will be difficult to fund startup programs equitably and with a pattern of reason.

When services have high unit cost but low utilization they meet the criteria for them to be considered possible candidates for cross-over or shared services.

MH/DD/SA has established a set of core services that should be available in each region however they need to include capacity guidelines, requirements, or targets with which to measure when "enough" services are available. These core services are designed not only to provide an array of services that will meet the needs of each region's eligible populations, but to prevent the unnecessary expenditure of dollars for services that are of higher cost because lower cost and lower intensity services that are often more effective are not available. These services should exist within each region and often within geographic sub-regions. A system needs measures of each in order to judge capacity.

The definition and delivery of a service should be consistent in order to determine capacity for a particular service. A specific process should be outlined for program start-up that requires a Supervisory person to receive training in the practice and implementation of the program prior to application for the remainder of the program start-up. Subsequently three to six months operating cost should be used as start up

funding depending on the scope of the program. LMEs should be required to follow specific operational and budgetary guidelines established for each desired EBP.

Some services are included within the EBP Models produced for the Division that are not EBP, but necessary until they can either be phased out (e.g. Community Rehabilitation programs that substitute for competitive employment and community integration) or utilized only as a last alternative in the array of service, such as “residential care”

State Facilities

Data shows that the State needs a reasonably aggressive rate of State Facility downsizing to stay ahead of population trends and economic increases.

The seemingly large SA reduction in admissions can be made with the use of facility based crisis, community detoxification and the use of ADATCs rather than psychiatric hospital care. As stated previously, policy regarding admissions and transfer of funds must be established first. While advocates want a slow transition from state facilities, the Legislature will have to balance the pace of downsizing with the increased cost associated with the slower pace.

The State, in order to implement a proper downsizing scenario must first build community-based service structures that allow an appropriate level of care to be provided. Through hospital discharges and the onset of services provided to those exiting state facilities and eligible for Medicaid, the amount of net state funds required each year will be reduced.

Transferring funds from the state hospitals alone will not be sufficient to meet the need.

Continuity of Care

A Continuity of Care Index was calculated and is included in the Model for each county. It is clear that continuity of services is insufficient to ensure system effectiveness. The question becomes, how much can the state afford and how much is enough?

Financial Positions

There are number of financial positions and policy decisions the State could pursue.

- The Medicaid benefit is frequently augmented with other funding and this practice should be reconsidered.
- The State and LMEs should reduce treatment variations that are based on providers' or consumers' individual preferences, rather than their demonstrated effects on treatment outcomes.
- Using categorical “buckets” of money make the equitable standardization of a system difficult and NC should persist in its efforts to utilize blended funding streams..
- Seek a Medicaid waiver to allow limitations on who can be providers, to allow services to grow differently in different regions, and to pay for services with

mechanisms that allow incentives for efficiency as well as good clinical and consumer outcomes.

- Implement a state-wide ability pay schedule
- Consider a “Buy-in” to the Medicaid program for its “working poor”.
- Collect room and board out of other resources such as SSI payments that are paid for this purpose.
- Monitor the extent to which people are assisted in gaining entitlements and other resources that assist in paying for their care and to reduce the amount of time consumers are removed from Medicaid unnecessarily.
- Consider decertification of the ICFMR programs transferring them to local LMEs to encourage community inclusion.

Monitoring and Oversight

MH transformation requires an increase in Division monitoring and technical assistance which cannot be effectively pursued with current levels of staff.

- Monitoring state hospital downsizing
- Handling Appeals and Grievances
- Providing support for a cultural shift from traditional modes of practice to EBP in the field
- Developing and training a cadre of competent consumers
- Monitoring data including continuity and access measures
- Providing assistance/consultation for Program Start-up
- Monitoring new programs and measuring fidelity to standards
- Monitoring the phasing out of non-EBP programs
- Performing UM review of select State Hospital admissions to determine if admission was a first option rather than a last resort.
- Research and apply for waiver opportunities
- Develop and implement rules as approved
- Complete routine and scheduled LME reviews
- Provide leadership versus crisis management
- Conduct a system review to evaluate roles of each player in the system and clarify those roles and responsibilities to prevent rework

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